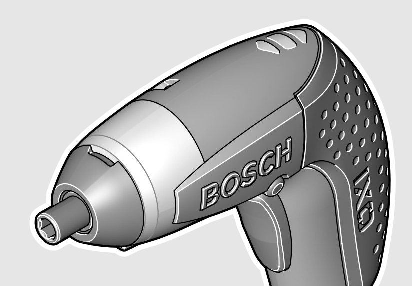



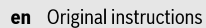
Robert Bosch GmbH
Power Tools Division
70745 Leinfelden-Echterdingen
Germany

www.bosch-pt.com

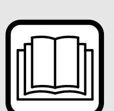
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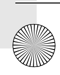
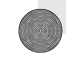


IXO Professional

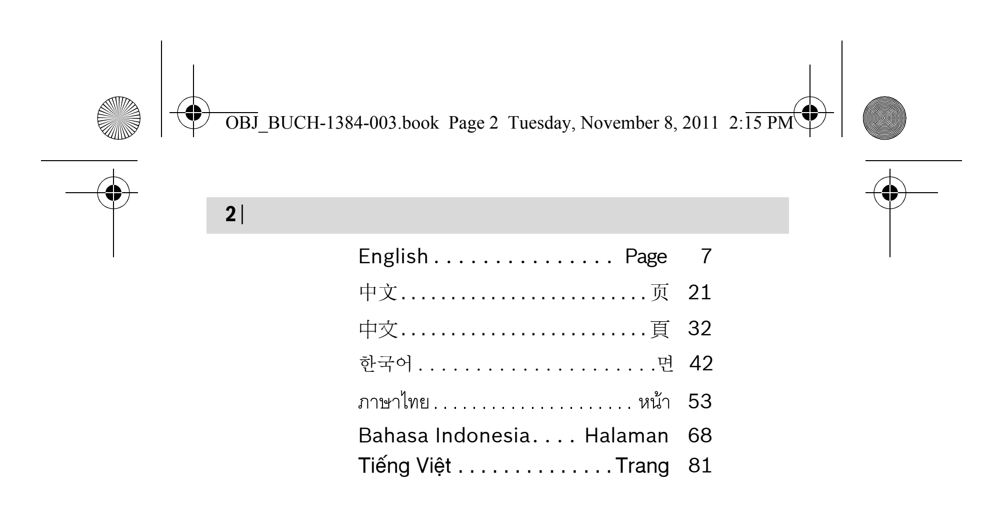



en Original instructions
cn 正本使用说明书
tw 正本使用說明書
ko 사용 설명서 원본
th หนังสือคู่มือการใช้งานฉบับต้นแบบ
id Petunjuk-Petunjuk untuk Penggunaan Orisinal
vi Bảng hướng dẫn nguyên bản

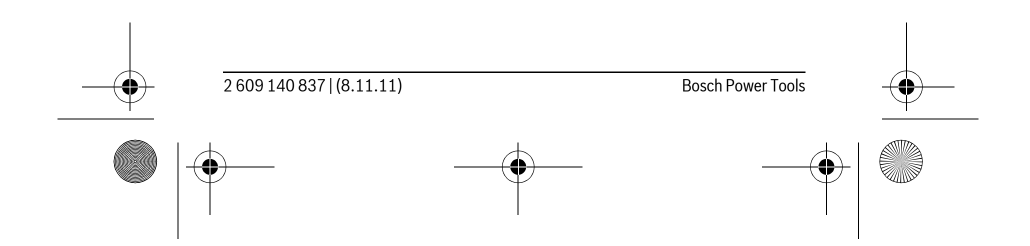


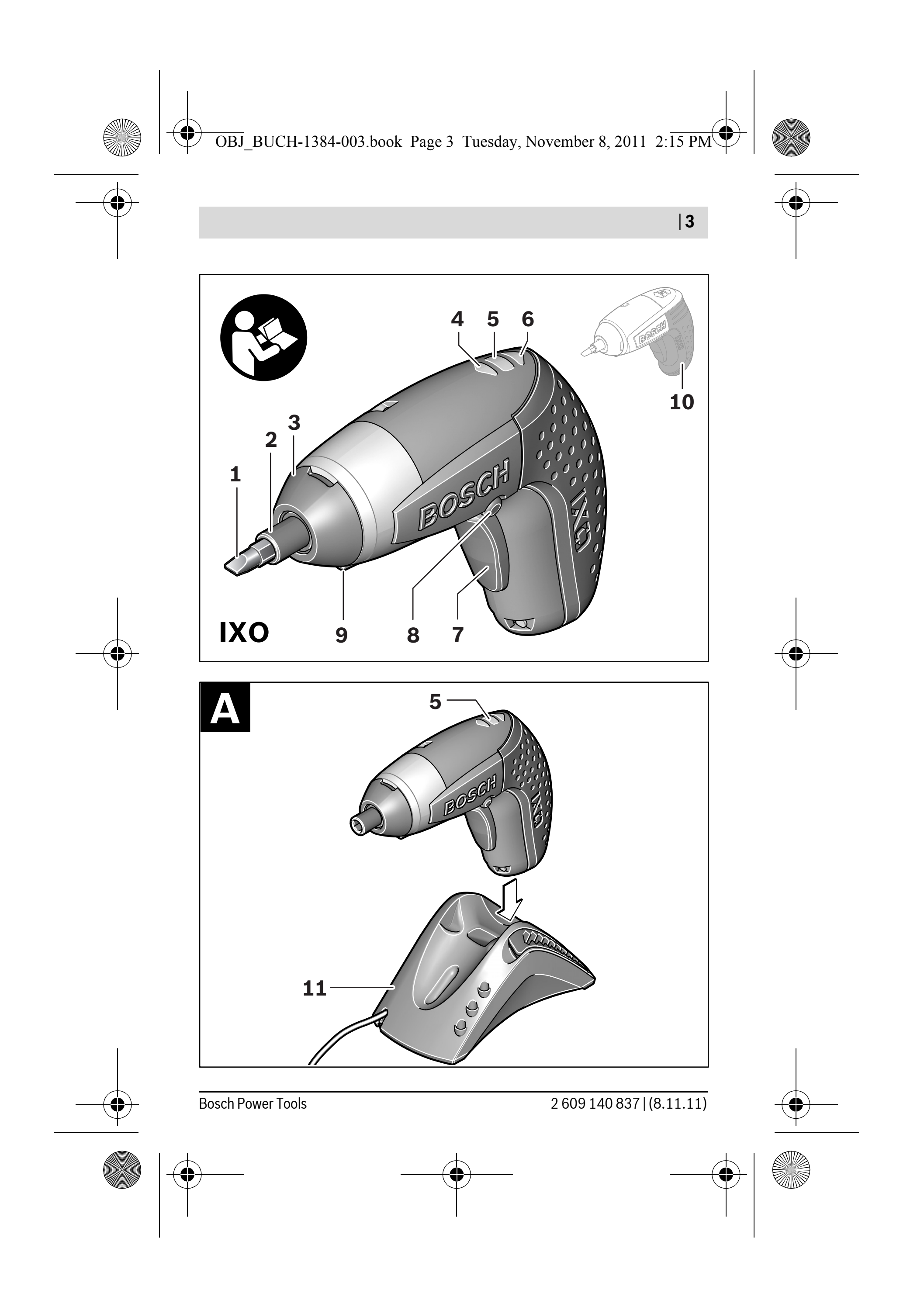



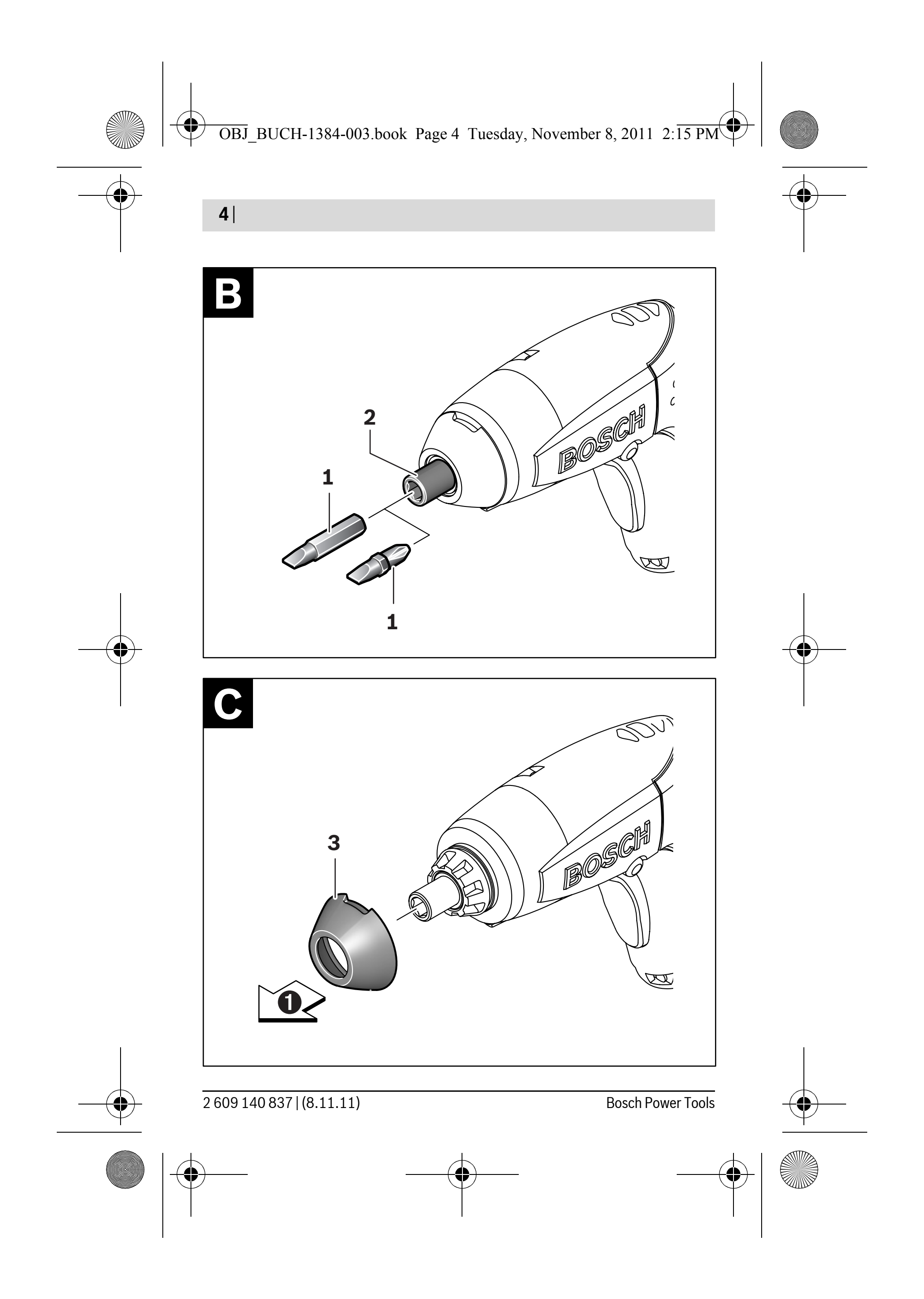


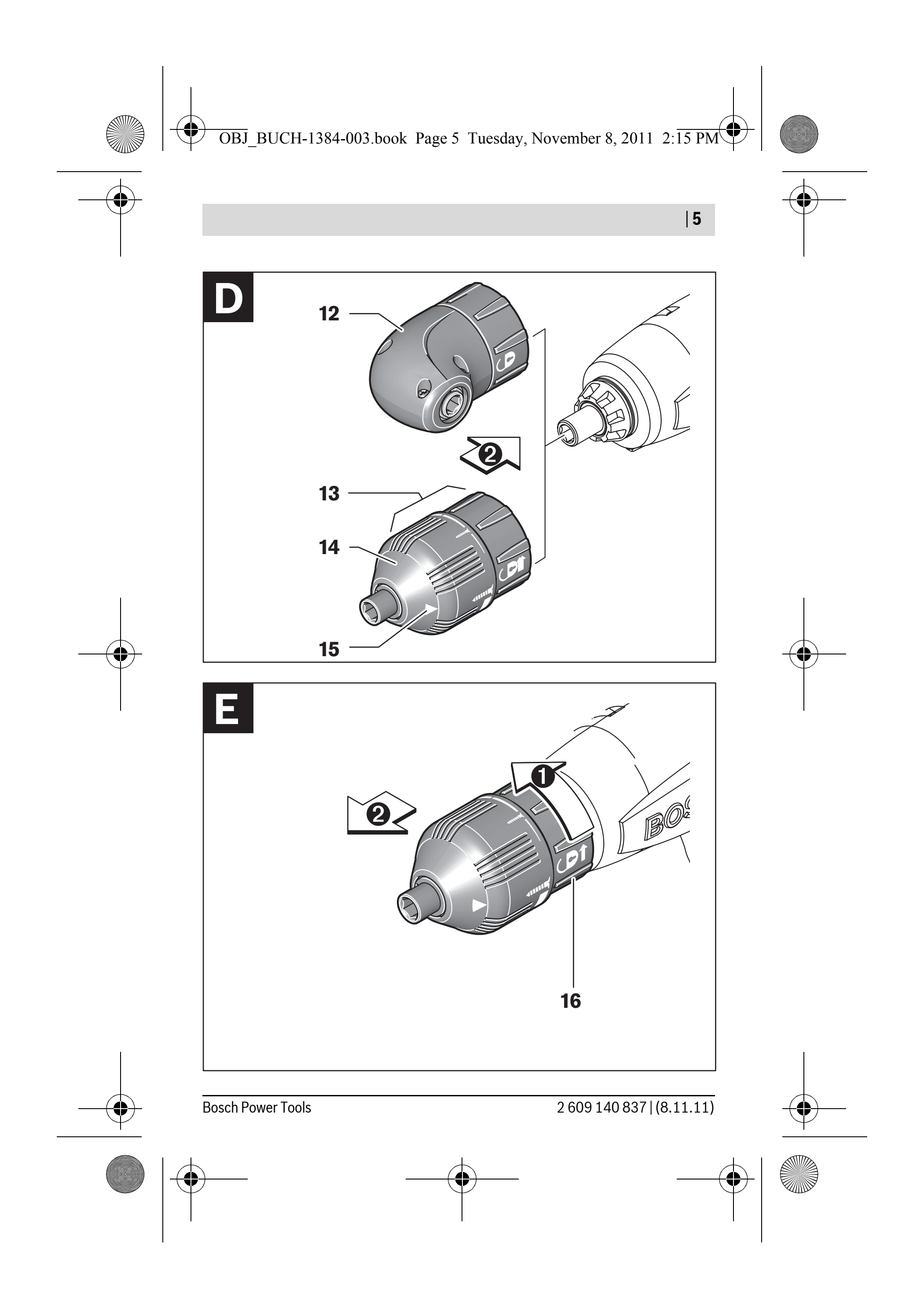


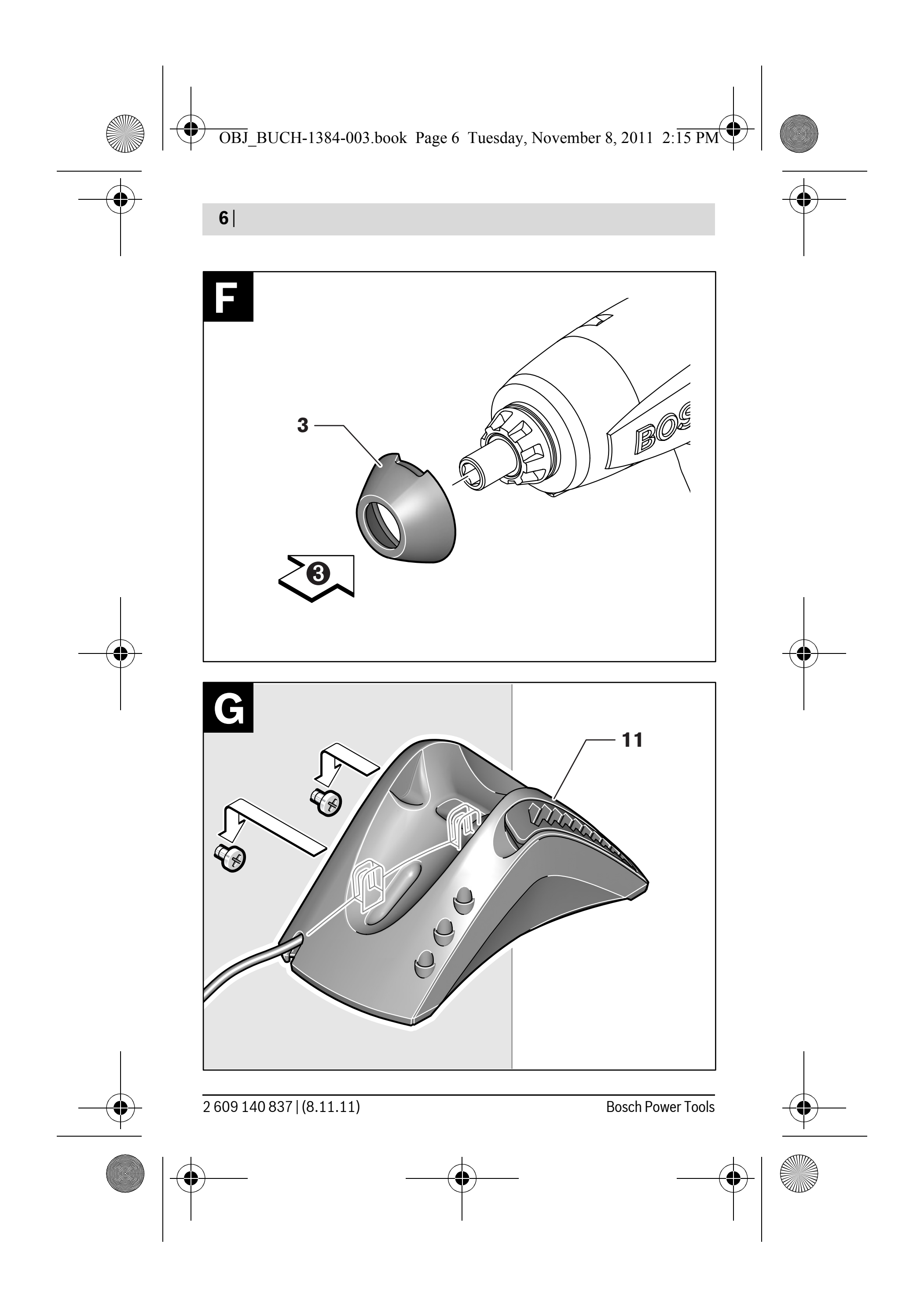


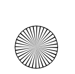
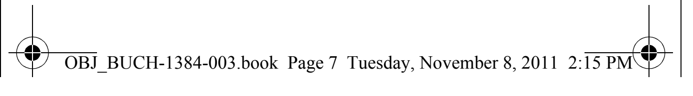


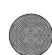

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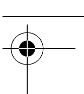

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English

Safety Notes

General Power Tool Safety Warnings


Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

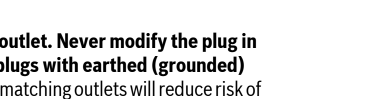
The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

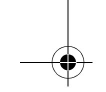
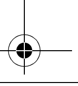
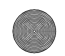
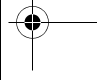
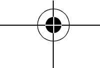
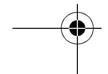
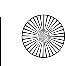
Work area safety

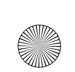
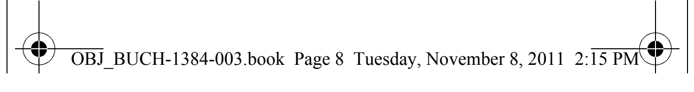
- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

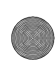
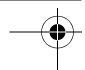
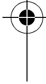
Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.



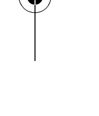



- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Personal safety

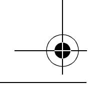
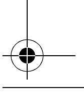
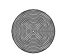
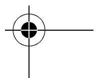
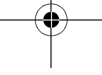
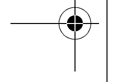
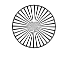
- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

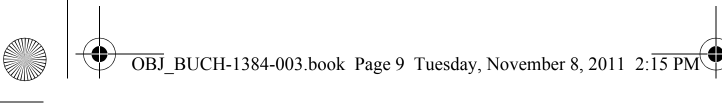


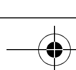
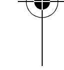
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

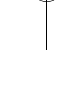
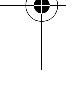
- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.



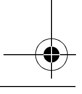



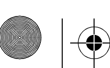
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

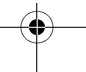
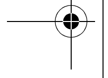
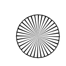



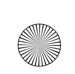
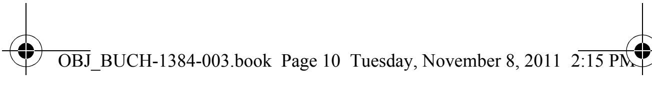
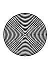
Battery tool use and care

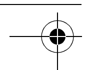
- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

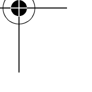







Service

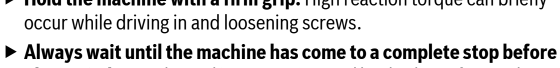
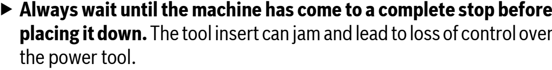
- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Safety Warnings for Screwdrivers

- **Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring.** Fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **Hold the machine with a firm grip.** High reaction torque can briefly occur while driving in and loosening screws.



- **Always wait until the machine has come to a complete stop before placing it down.** The tool insert can jam and lead to loss of control over the power tool.

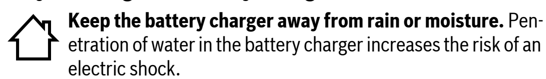
- **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.



Protect the power tool against heat, e. g., against continuous intense sunlight, fire, water, and moisture. Danger of explosion.

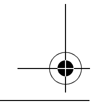
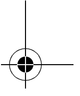
- **In case of damage and improper use of the battery, vapours may be emitted. Provide for fresh air and seek medical help in case of complaints.** The vapours can irritate the respiratory system.

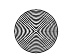
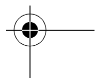
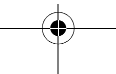
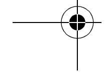
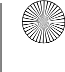
Safety Warnings for Battery Chargers

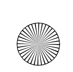
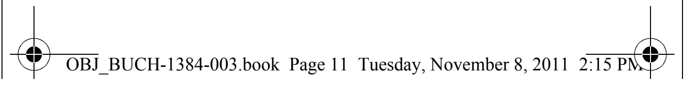


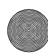
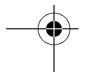
Keep the battery charger away from rain or moisture. Penetration of water in the battery charger increases the risk of an electric shock.

- **Only charge Bosch lithium ion batteries or batteries installed in Bosch products with the voltages listed in the technical data.** Otherwise there is danger of fire and explosion.
- **Keep the battery charger clean.** Contamination can lead to danger of an electric shock.

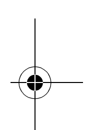



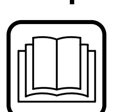
- **Before each use, check the battery charger, cable and plug. If damage is detected, do not use the battery charger. Never open the battery charger yourself. Have repairs performed only by a qualified technician and only using original spare parts.** Damaged battery chargers, cables and plugs increase the risk of an electric shock.
- **Do not operate the battery charger on easily inflammable surfaces (e. g., paper, textiles, etc.) or surroundings.** The heating of the battery charger during the charging process can pose a fire hazard.
- **Supervise children.** This will ensure that children do not play with the charger.
- **Children or persons that owing to their physical, sensory or mental limitations or to their lack of experience or knowledge, are not capable of securely operating the charger, may only use this charger under supervision or after having been instructed by a responsible person.** Otherwise, there is danger of operating errors and injuries.



Products sold in **GB only**: Your product is fitted with a BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362).
If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.
The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.



Product Description and Specifications

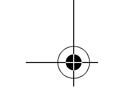
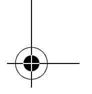
Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

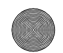
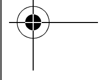
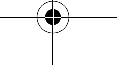
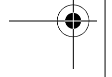
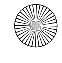
Intended Use

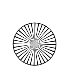
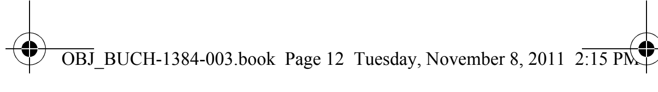
The machine is intended for driving in and loosening screws.

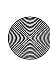
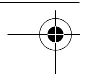
Product Features

The numbering of the product features refers to the illustration of the machine on the graphics page.

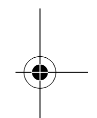



1 Screwdriver bit*
2 Tool holder
3 Rubber cap
4 Indicator for right rotation
5 Battery charge-control indicator
6 Indicator for left rotation
7 On/Off switch
8 Rotational direction switch
9 “PowerLight”
10 Handle (insulated gripping surface)
11 Battery charger
12 Angle driver head*
13 Torque attachment*
14 Torque presetting ring*
15 Torque-setting mark*
16 Release ring*



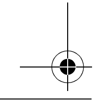
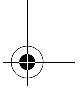
***Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.**

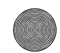
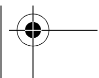
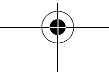
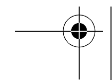
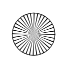


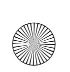
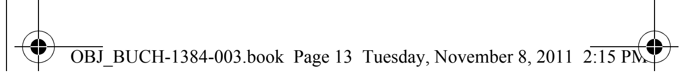
Technical Data

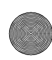
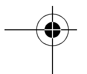
Cordless Screwdriver		IXO Professional
Article number		3 601 J60 2..
Rated voltage	V=	3.6
No-load speed	min^{-1}	180
Max. torque for hard/soft screwdriving application according to ISO 5393	Nm	4/3
Max. screw dia.	mm	5
Weight according to EPTA-Procedure 01/2003	kg	0.3

Please observe the article number on the type plate of your machine. The trade names of the individual machines may vary.

Cordless Screwdriver		IXO Professional
Battery		**Li-Ion**
Capacity	Ah	1.3
Number of battery cells		1
Battery Charger		
Article number		2 607 225 093
Charging time	h	5
Protection class		□ / II

Please observe the article number on the type plate of your machine. The trade names of the individual machines may vary.

Assembly

- **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.

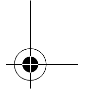
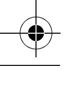
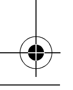
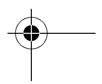
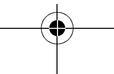
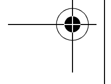
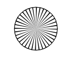
Battery Charging (see figure A)

- **Do not use other battery chargers.** The supplied battery charger is designed for the Lithium-Ion battery in your machine.
- **Observe the mains voltage!** The voltage of the power supply must correspond with the data given on the nameplate of the battery charger. Battery chargers marked with 230 V can also be operated with 220 V.

Note: The battery is supplied partially charged. To ensure full capacity of the battery, completely charge the battery in the battery charger before using your power tool for the first time.

The Lithium-Ion battery can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery.

The Lithium-Ion battery is protected against deep discharging. When the battery is discharged, the machine is automatically switched off by a protective circuit: The inserted tool no longer moves and a slight whistling noise can be heard.



Do not continue to press the On/Off switch after the machine has been automatically switched off. The battery can be damaged.

When the battery charge-control indicator **5** lights up **red** while the On/Off switch **7** is **depressed half way**, then the battery has less than 30% of its capacity and should be charged.

The charging procedure starts as soon as the main plug of the battery charger is inserted into the socket and the cordless screwdriver is afterwards placed on the battery charger **11**.

The battery charge-control indicator **5** indicates the charging progress. The indicator lights up **green** during the charging process. When the battery charge-control indicator **5** is no longer lit, the battery is fully charged.

During the charging procedure, the handle of the machine warms up. This is normal.

Disconnect the battery charger from the mains supply when not using it for longer periods.

The power tool cannot be used during the charge procedure; it is not defective when inoperative during the charging procedure.

- **Protect the battery charger against moisture!**

Observe the notes for disposal.

Changing the Tool (see figure B)

- **Do not use double-sided screwdriver blades that are longer than 25 mm.**

Insert the screwdriver bit **1** directly into the tool holder **2**.

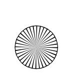
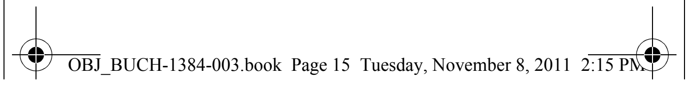
Torque Attachment/Angle Driver Head (see figures C – F)

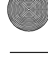
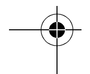
The angle driver head **12** enables screwdriving at hard to reach locations.

With the torque presetting ring **14** on the torque attachment **13**, the requested torque can be preset in 10 steps. With the correct setting, the tool bit is stopped as soon as the screw is driven flush into the material or when the set torque is reached.

Assembly (see figures C – D)

For assembly of the attachments, pull the rubber cap **3** off toward the front. Afterwards the attachments can be mounted. The attachments can be mounted offset by 45°.

Dismounting (see figures E – F)

To dismount the attachments, turn the release ring **16** in rotation direction ❶ and pull the attachment off toward the front. Afterwards, mount the rubber cap **3** again.

Operation

Starting Operation

Reversing the Rotational Direction

The rotational direction switch **8** is used to reverse the rotational direction of the machine. However, this is not possible with the On/Off switch **7** actuated.

Right rotation: For driving in screws, push the rotational direction switch **8** left to the stop.



The indicator for right rotation **4** lights up when the On/Off switch **7** is actuated and the motor is running.

Left Rotation: For loosening or unscrewing screws, push the rotational direction switch **8** right to the stop.



The indicator for left rotation **6** lights up when the On/Off switch **7** is actuated and the motor is running.

Switching On and Off

To **start** the machine, press the On/Off switch **7** and keep it pressed.

The power light **9** lights up when the On/Off switch **7** is slightly or completely pressed, and allows the work area to be illuminated when lighting conditions are insufficient.

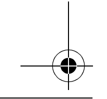
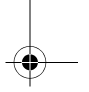
To switch off the machine, **release** the On/Off switch **7**.

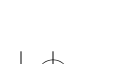
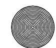
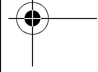
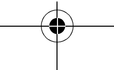
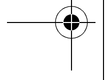
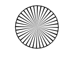
Fully automatic spindle locking (Auto-lock)

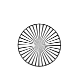
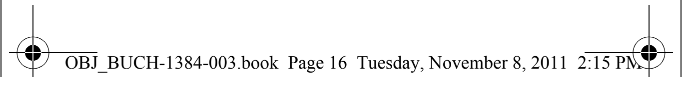
The drill spindle is locked when the On/Off switch **7** is not pressed.

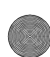
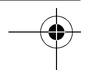
This enables screws to be screwed in, even when the battery is empty and allows for the machine to be used as a screwdriver.

- **When the drilling spindle is locked, do not press the On/Off switch 7 for more than 15 seconds. Otherwise the power tool can be damaged.**

Working Advice

- **Apply the power tool to the screw only when it is switched off.** Rotating tool inserts can slip off.

Up to 13 screwdriver bits can be stored on the side of the battery charger **11**. The fixture that holds the screwdriver bits can be removed.

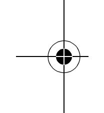
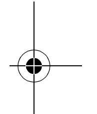
Wall-mounting the Battery Charger (see figure G)

The battery charger **11** can be mounted to a wall. For this, hang the charger via the slots on the side onto two screws.

Maintenance and Service

Maintenance and Cleaning

- **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.

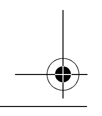
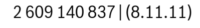
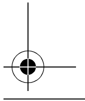
- **For safe and proper working, always keep the machine and ventilation slots clean.**

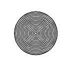
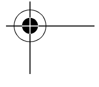
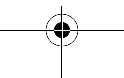
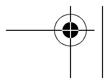
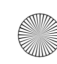
When the battery is no longer operative, please refer to an authorised after-sales service agent for Bosch power tools.

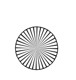
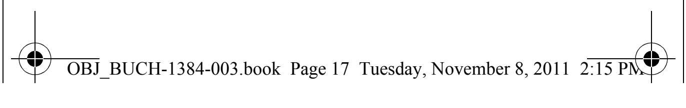
If the replacement of the supply cord is necessary, this has to be done by Bosch or an authorized Bosch service agent in order to avoid a safety hazard.

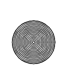
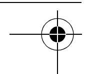
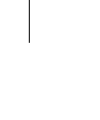
If the machine should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an after-sales service centre for Bosch power tools.

In all correspondence and spare parts order, please always include the 10-digit article number given on the type plate of the machine.

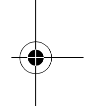




After-sales Service and Customer Assistance

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. Exploded views and information on spare parts can also be found under:
www.bosch-pt.com
Our customer service representatives can answer your questions concerning possible applications and adjustment of products and accessories.

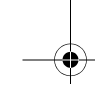
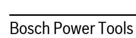
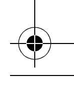
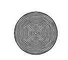
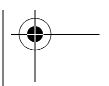
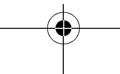
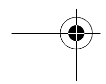
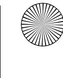
People's Republic of China

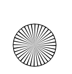
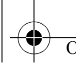
China Mainland
Bosch Power Tools (China) Co., Ltd.
567, Bin Kang Road
Bin Jiang District 310052
Hangzhou, P.R.China
Service Hotline: 400 826 8484
Fax: +86 571 8777 4502
E-Mail: contact.ptcn@cn.bosch.com
www.bosch-pt.com.cn

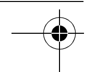



HK and Macau Special Administrative Regions
Robert Bosch Hong Kong Co. Ltd.
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North Point, Hong Kong
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Fax: +62 (21) 46 82 86 45/68 23
E-Mail: sales@multimayaka.co.id
www.bosch-pt.co.id

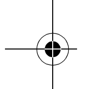
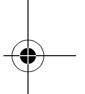
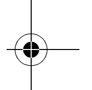





Philippines

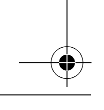
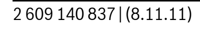
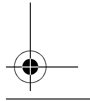
Robert Bosch, Inc.
28th Floor Fort Legend Towers,
3rd Avenue corner 31st Street,
Fort Bonifacio Global City,
1634 Taguig City, Philippines
Tel.: +63 (2) 870 3871
Fax: +63 (2) 870 3870
matheus.contiero@ph.bosch.com
www.bosch-pt.com.ph

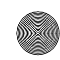
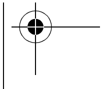
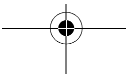
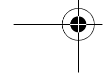
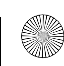
Bosch Service Center:
9725-27 Kamagong Street
San Antonio Village
Makati City, Philippines
Tel.: +63 (2) 899 9091
Fax: +63 (2) 897 6432
rosalie.dagdagan@ph.bosch.com

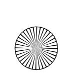
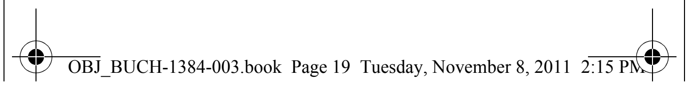




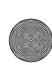
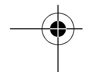
Malaysia

Robert Bosch (S.E.A.) Pte. Ltd.
No. 8A, Jalan 13/6
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Fax: +60 (3) 7958 3838
cheehoe.on@my.bosch.com
Toll-Free: 1800 880 188
www.bosch-pt.com.my

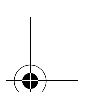
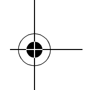



Thailand

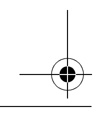
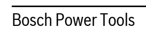
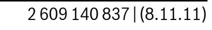
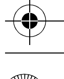
Robert Bosch Ltd.
Liberty Square Building
No. 287, 11 Floor
Silom Road, Bangrak
Bangkok 10500
Tel.: +66 (2) 6 31 18 79 – 18 88 (10 lines)
Fax: +66 (2) 2 38 47 83
Robert Bosch Ltd., P. O. Box 2054
Bangkok 10501, Thailand

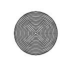
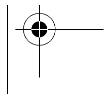
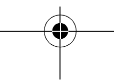
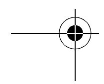
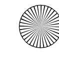
Bosch Service – Training Centre
2869-2869/1 Soi Ban Kluay
Rama IV Road (near old Paknam Railway)
Prakanong District
10110 Bangkok
Thailand
Tel.: +66 (2) 6 71 78 00 – 4
Fax: +66 (2) 2 49 42 96
Fax: +66 (2) 2 49 52 99

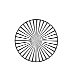
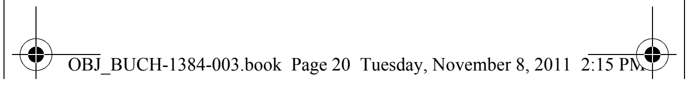



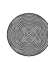
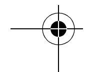
Singapore

Robert Bosch (SEA) Pte. Ltd.
11 Bishan Street 21
Singapore 573943
Tel.: +65 6571 2772
Fax: +65 6350 5315
leongheng.leow@sg.bosch.com
Toll-Free: 1800 333 8333
www.bosch-pt.com.sg

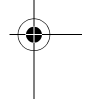



Vietnam

Robert Bosch Vietnam Co. Ltd
10/F, 194 Golden Building
473 Dien Bien Phu Street
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84 Ho Chi Minh City
Vietnam
Tel.: +84 (8) 6258 3690 ext. 413
Fax: +84 (8) 6258 3692
hieu.lagia@vn.bosch.com
www.bosch-pt.com

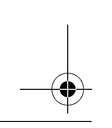
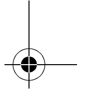
Australia, New Zealand and Pacific Islands

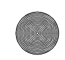
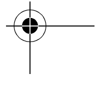
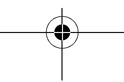
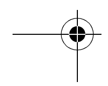
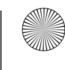
Robert Bosch Australia Pty. Ltd.
Power Tools
Locked Bag 66
Clayton South VIC 3169
Customer Contact Center
Inside Australia:
Phone: +61 (01300) 307 044
Fax: + 61 (01300) 307 045
Inside New Zealand:
Phone: +64 (0800) 543 353
Fax: +64 (0800) 428 570
Outside AU and NZ:
Phone: +61 (03) 9541 5555
www.bosch.com.au

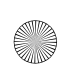
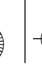



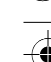
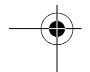
Transport

The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements. The user can transport the batteries by road without further requirements.
When being transported by third parties (e.g.: air transport or forwarding agency), special requirements on packaging and labelling must be observed. For preparation of the item being shipped, consulting an expert for hazardous material is required.

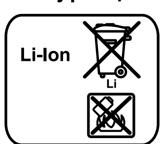
Disposal



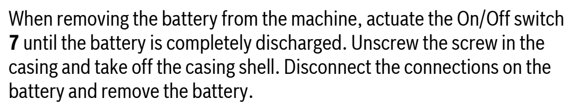
The machine, rechargeable batteries, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of power tools and batteries/rechargeable batteries into household waste!

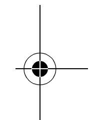
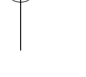
Battery packs/batteries:



Li-ion:
Please observe the instructions in section “Transport”, page 20.



- **Integrated batteries may only be removed for disposal.** Opening the housing shell can damage or destroy the power tool.

When removing the battery from the machine, actuate the On/Off switch **7** until the battery is completely discharged. Unscrew the screw in the casing and take off the casing shell. Disconnect the connections on the battery and remove the battery.

Subject to change without notice.

中文

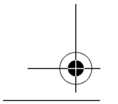
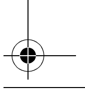
安全规章

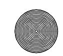
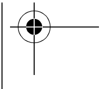
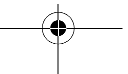
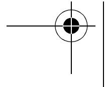
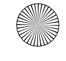
电动工具通用安全警告

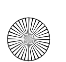
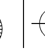
⚠ 警告 **阅读所有警告和所有说明！**不遵照以下警告和说明会导致电击、着火和 / 或严重伤害。

保存所有警告和说明书以备查阅。

在所有下列的警告中术语 " 电动工具 " 指市电驱动 （有线）电动工具或电池驱动 （无线）电动工具。





工作场地的安全

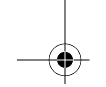
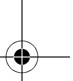
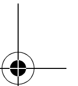
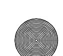
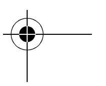
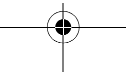
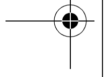
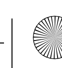
- ▶ **保持工作场地清洁和明亮。**混乱和黑暗的场地会引发事故。
- ▶ **不要在易爆环境，如有易燃液体、气体或粉尘的环境下操作电动工具。**电动工具产生的火花会点燃粉尘或气体。
- ▶ **让儿童和旁观者离开后操作电动工具。**注意力不集中会使你失去对工具的控制。

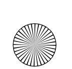
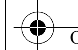
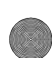
电气安全

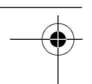
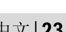
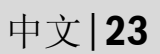
- ▶ **电动工具插头必须与插座相配。绝不能以任何方式改装插头。**需接地的电动工具不能使用任何转换插头。未经改装的插头和相配的插座将减少电击危险。
- ▶ **避免人体接触接地表面，如管道、散热片和冰箱。**如果你身体接地会增加电击危险。
- ▶ **不得将电动工具暴露在雨中或潮湿环境中。**水进入电动工具将增加电击危险。
- ▶ **不得滥用电线。绝不能用电线搬运、拉动电动工具或拔出其插头。使电线远离热源、油、锐边或运动部件。**受损或缠绕的软线会增加电击危险。
- ▶ **当在户外使用电动工具时，使用适合户外使用的外接软线。**适合户外使用的软线将减少电击危险。
- ▶ **如果在潮湿环境下操作电动工具是不可避免的，应使用剩余电流动作保护器 （RCD）。**使用 RCD 可减小电击危险。

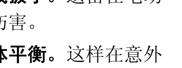
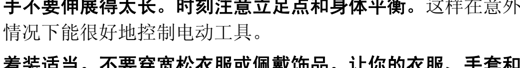
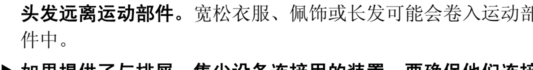
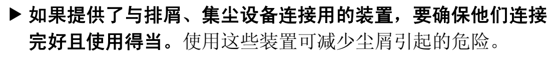
人身安全

- ▶ **保持警觉，当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦，或在有药物、酒精或治疗反应时，不要操作电动工具。**在操作电动工具时瞬间的疏忽会导致严重人身伤害。
- ▶ **使用个人防护装置。始终佩戴护目镜。**安全装置，诸如适当条件下使用防尘面具、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。
- ▶ **防止意外起动。确保开关在连接电源和 / 或电池盒、拿起或搬运工具时处于关断位置。**手指放在已接通电源的开关上或开关处于接通时插入插头可能会导致危险。

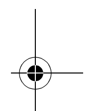









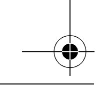
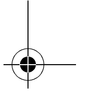
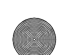
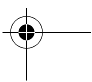
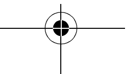
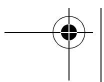
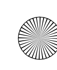
- **在电动工具接通之前，拿掉所有调节钥匙或扳手。**遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。

- **手不要伸展得太长。时刻注意立足点和身体平衡。**这样在意外情况下能很好地控制电动工具。

- **着装适当。不要穿宽松衣服或佩戴饰品。让你的衣服、手套和头发远离运动部件。**宽松衣服、佩饰或长发可能会卷入运动部件中。

- **如果提供了与排屑、集尘设备连接用的装置，要确保他们连接完好且使用得当。**使用这些装置可减少尘屑引起的危险。


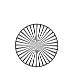
电动工具使用和注意事项

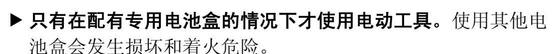
- **不要滥用电动工具，根据用途使用适当的电动工具。**选用适当设计的电动工具会使你工作更有效、更安全。
- **如果开关不能接通或关断工具电源，则不能使用该电动工具。**不能用开关来控制的电动工具是危险的且必须进行修理。

- **在进行任何调节、更换附件或贮存电动工具之前，必须从电源上拔掉插头和／或使电池盒与工具脱开。**这种防护性措施将减少工具意外起动的危险。
- **将闲置不用的电动工具贮存在儿童所及范围之外，并且不要让不熟悉电动工具或对这些说明不了解的人操作电动工具。**电动工具在未经培训的用户手中是危险的。
- **保养电动工具。检查运动件是否调整到位或卡住，检查零件破损情况和影响电动工具运行的其他状况。如有损坏，电动工具应在使用前修理好。**许多事故由维护不良的电动工具引发。
- **保持切削刀具锋利和清洁。**保养良好的有锋利切削刃的刀具不易卡住而且容易控制。
- **按照使用说明书，考虑作业条件和进行的作业来使用电动工具、附件和工具的刀头等。**将电动工具用于那些与其用途不符的操作可能会导致危险。

电池式工具使用和注意事项

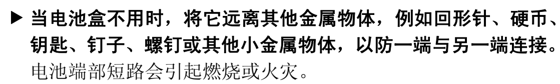
- **只用制造商规定的充电器充电。**将适用于某种电池盒的充电器用到其他电池盒时会发生着火危险。



- **只有在配有专用电池盒的情况下才使用电动工具。**使用其他电池盒会发生损坏和着火危险。



- **当电池盒不用时，将它远离其他金属物体，例如回形针、硬币、钥匙、钉子、螺钉或其他小金属物体，以防一端与另一端连接。**电池端部短路会引起燃烧或火灾。
- **在滥用条件下，液体会从电池中溅出；避免接触。如果意外碰到了，用水冲洗。如果液体碰到了眼睛，还要寻求医疗帮助。**从电池中溅出的液体会发生腐蚀或燃烧。

维修

- **将你的电动工具送交专业维修人员，使用同样的备件进行修理。**这样将确保所维修的电动工具的安全性。

针对起子机的安全规章

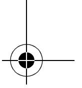
- **工作时如果电动起子机可能割断隐藏的电线，一定要握住绝缘手柄操作机器。**电动起子机如果接触了带电的线路，电动工具上的金属部件会导电，可能造成操作者触电。
- **务必握紧电动工具。**在拧紧和放松螺丝时，可能出现短暂的强大反击。
- **等待电动工具完全静止后才能够放下机器。**机器上的工具可能在工作中被夹住，而令您无法控制电动工具。
- **维修电动工具、更换电动工具上的工具或者搬运电动工具时，务必把正逆转开关调整到中央的位置。**如果不小心启动起停开关，可能造成伤害。

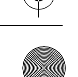
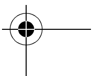
电动工具必须远离高温，例如长期的日晒、火焰、水和湿气等。有爆炸的危险。

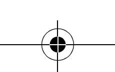
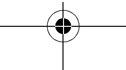
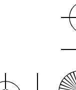
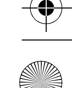
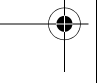
- **如果蓄电池损坏了，或者未按照规定使用蓄电池，蓄电池中会散发出有毒蒸汽。工作场所必须保持空气流通，如果身体有任何不适必须马上就医。**蓄电池散发的蒸汽会刺激呼吸道。

有关充电器的安全规章

充电器必须远离雨水或湿气。如果让水渗入充电器中，会提高触电的危险。

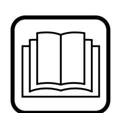


- ▶ **只能使用技术数据中提供的电压，替博世的锂离子蓄电池或安装在博世产品上的蓄电池充电。** 否则有火灾和爆炸的危险。
- ▶ **充电器必须保持清洁。**如果充电器上囤积污垢容易导致触电。
- ▶ **使用前必须检查充电器、电线和插头。如果发现故障则不可继续使用充电器。不可擅自拆开充电器。充电器只能交给合格的专业电工修理，并且只能换装原厂零件。**损坏的充电器、电线和插头会提高使用者遭受电击的危险。
- ▶ **充电时不可以把充电器放置在易燃的物品 （例如纸，纺织品等）上。也不可以在易燃的环境中使用充电器。**充电时充电器会变热，如果在上述状况下使用充电器容易酿造火灾。
- ▶ **看顾好儿童。**以确保儿童不会玩弄充电器。
- ▶ **儿童和成人如果因为生理、感官、精神上的能力，或因为缺乏经验、知识而无法有把握地操作充电器，只能够在相关负责人的监督下或指导下使用本充电器。**否则会造成操作错误并且有受伤的危险。

产品和功率描述

阅读所有的警告提示和指示。如未确实遵循警告提示和指示，可能导致电击、火灾並且 / 或其他的严重伤害。

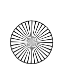
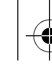
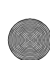
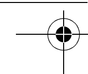
按照规定使用机器

本电动工具适用于拧入和拧出螺丝。

插图上的机件

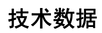
机件的编号和电动工具详解图上的编号一致。

1 螺丝批嘴*
2 工具接头
3 橡胶盖
4 正转指示灯
5 蓄电池的充电电量指示灯
6 逆转指示灯

7 起停开关
8 正逆转开关
9 灯 " 照明灯 "
10 手柄 （绝缘握柄）
11 充电器
12 直角套筒*
13 扭力套筒*
14 扭力设定环*
15 设定扭力的记号*
16 解锁环*

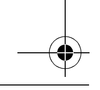
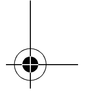
***图表或说明上提到的附件，并不包含在基本的供货范围中。本公司的附件清单中有完整的附件供应项目。**

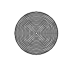
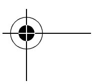
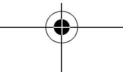
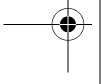
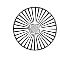



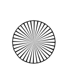
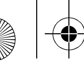
技术数据

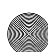
充电式起子机		IXO Professional
物品代码		3 601 J60 2..
额定电压	伏特＝	3,6
无负载转速	次 / 分	180
根据 ISO 5393，硬拧转 / 软拧转的最大扭力	牛顿米	4/3
最大螺丝直径	毫米	5
重量符合 EPTA-Procedure 01/2003	公斤	0,3
充电电池		**锂离子**
容量	安培小时	1,3
蓄电池室的数目		1
充电器		
物品代码		2 607 225 093
充电时间	小时	5
绝缘等级		□/II

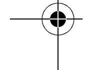
请认清电动工具铭牌上的物品代码。电动工具在销售市场上没有统一的商品名称。






安装

▶ **维修电动工具、更换电动工具上的工具或者搬运电动工具时，务必把正逆转开关调整到中央的位置。**如果不小心启动起停开关，可能造成伤害。

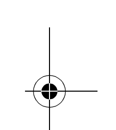
为蓄电池充电 （参考插图 A）

▶ **不可以使用其它厂牌的充电器。**附带的充电器是电动工具上的锂离子蓄电池的专用充电器。

▶ **注意电源的电压！** 电源的电压必须和充电器铭牌上标示的电压数据一致。

指示：蓄电池在交货时只完成部分充电。首度使用电动工具之前，必须先充足蓄电池的电以确保蓄电池的功率。

可以随时为锂离子蓄电池充电，不会缩短电池的使用寿命。如果充电过程突然中断，也不会损坏电池。



锂离子蓄电池不会过度放电。电池的电量如果用尽了，保护开关会自动关闭电动工具：此时电动工具会停止转动，并且可以听到轻微的警示声響。

⚠ 注意 **电动工具被关闭之后，切勿继续按住起停开关。**可能损坏电池。

当起停开关 **7 被按到一半的位置** 时 如果充电电量指示灯 **5** 亮起 **红光**，代表蓄电池的现存电量已经不足 百分之三十，应该为电池充电了。

在插好充电器的插头，并且把充电式起子机装入充电器 **11** 之后，充电器便开始充电。

充电电量指示灯 **5** 会显示充电的过程。充电中指示灯会亮起 **绿灯**。如果充电电量指示灯 **5** 熄灭了，代表充电过程已经大功告成。

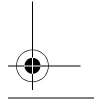
在充电过程中电动工具的手柄会变热，这是正常的现象。

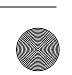
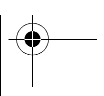
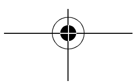
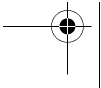
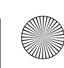
不使用充电器时必须中断充电器的电源供应。

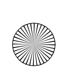
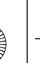
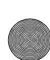
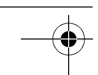
在充电过程中无法使用电动工具； 如果在充电过程中电动工具没有反应，并非机器故障了。

▶ **保护充电器，勿让湿气渗入！**

请注意有关作废处理的规定。





更换工具 （参考插图 B）

▶ **不可以使用长度超过 25 毫米 的双端螺丝起子头。**

把螺丝批嘴 **1** 直接插入工具接头 **2** 中。

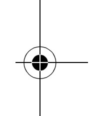
扭力套筒 / 直角套筒 (参考插图 C – F)

使用直角套筒 **12** 也可以在不易进入的位置拧入、拧出螺丝。

使用扭力设定环 **14** （位在扭力套筒 **13** 上）可以设定需要的扭力，总共有 10 个扭力选档。如果扭力设定正确，只要螺丝头已经平贴在工件表面，或者到达了预定的扭力，安装在机器上的工具便会停止转动。

安装 （参考插图 C–D）

安装套筒时先向前拉出橡胶盖 **3**，接着便可以装上套筒。您也可以把套筒转动 45 ° 后再安装。



操作 （参考插图 E–F）

拆卸套筒时要先拧转解锁环 **16** （要朝着 ❶ 的方向拧转），并向前拉出套筒。接着再装回橡胶盖 **3**。



操作

操作机器

改变转向

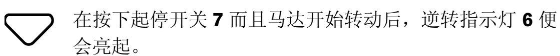
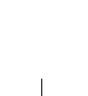
使用正逆转开关 **8** 可以改变机器的转向。如果按住了起停开关 **7**，则无法改变转向。

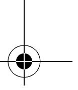
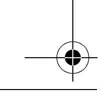
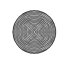
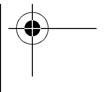
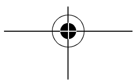
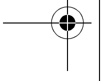
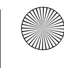
正转：适用于拧入螺丝，把正逆转开关 **8** 向左推到底。

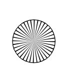
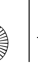
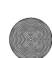
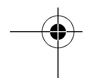
在按下起停开关 **7** 而且马达开始转动后，正转指示灯 **4** 便会亮起。

逆转：适用于拧松或拧出螺丝，把正逆转开关 **8** 向右推到底。

在按下起停开关 **7** 而且马达开始转动后，逆转指示灯 **6** 便会亮起。


OBJ_BUCH-1384-003.book Page 29 Tuesday, November 8, 2011 2:15 PM



开动 / 关闭

操作电动工具 时先按下电动工具的起停开关 **7**，并持续按著。

轻按或是把起停开关 **7** 按到底时灯 **9** 会亮起。在照明状况不佳的环境中可以借此照亮操作位置。

放开起停开关 **7** 便可以 **关闭** 电动工具。

全自动的主轴锁定功能 (Auto-Lock)

如果未按下起停开关 **7** 主轴会被锁定。

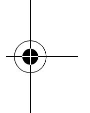
因此，即使蓄电池没电了，也可以使用本电动工具拧入螺丝，换句话说，也可以使用本机器充当螺丝起子。



- **当主轴被堵住时，如果继续按住起停开关 7 超过 15 秒，可能会损坏电动工具。**

有关操作方式的指点

- **确定电动工具已经关闭了，才可以把电动工具顶在螺丝头上。** 转动中的起子头容易从螺丝头上滑开。



充电器 **11** 上有可以安插 13 个螺丝批嘴的存放槽。这个存放槽是活动的可以取出。

固定充电器 （参考插图 G ）

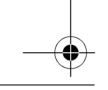
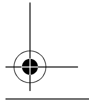
您可以把充电器 **11** 固定在墙上。固定时可以把充电器侧面的凹槽套入墙上的 2 个螺丝中。

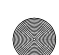
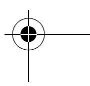
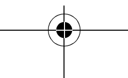
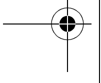
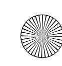
维修和服务

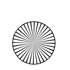
维修和清洁

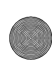
- **维修电动工具、更换电动工具上的工具或者搬运电动工具时，务必把正逆转开关调整到中央的位置。** 如果不小心启动起停开关，可能造成伤害。
- **电动工具和通风间隙都必须保持清洁，这样才能够提高工作品质和安全性。**

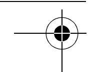
如果蓄电池故障了，可以向博世电动工具公司授权的客户服务中心求援。











如果必须更换连接线，务必把这项工作交给博世或 者经授权的博世电动工具顾客服务执行，以避免危害机器的安全性能。

本公司生产的电动工具都经过严密的品质检验，如果机器仍然发生故障，请将机器交给博世电动工具公司授权的顾客服务处修理。

询问和订购备件时，务必提供机器铭牌上标示的 10 位数物品代码。

顾客服务处和顾客咨询中心

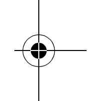
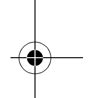
本公司顾客服务处负责回答有关本公司产品的修理，维护和备件的问题。以下的网页中有爆炸图和备件的资料：
www.bosch-pt.com

博世顾客咨询团队非常乐意为您解答有关购买，使用和设定本公司产品及附件的问题。

有关保证，维修或更换零件事宜，请向合格的经销商查询。

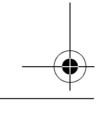
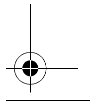


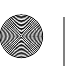
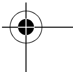
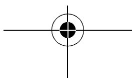
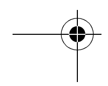
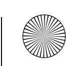
中国大陆

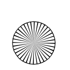
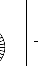



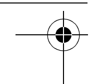
博世电动工具 （中国）有限公司
中国 浙江省 杭州市
滨江区滨康路 567 号
邮政编码：310052
免费服务热线：400 826 8484
传真：+86 571 8777 4502
电邮：contact.ptcn@cn.bosch.com
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制造商地址：
罗伯特博世有限公司
营业范围电动工具
邮箱号码 100156
70745 Leinfelden-Echterdingen （莱菲登 - 艾希德登）
Deutschland （德国）

搬运

随着机器一起供货的锂离子蓄电池必须受危险物品法规范。使用者无须另外使用保护包装便可以运送该蓄电池。
但是如果将它交由第三者运送 （例如：寄空运或委托运输公司）则要使用特殊的包装和标示。此时必须向危险物品专家请教有关寄送危险物品的相关事宜。

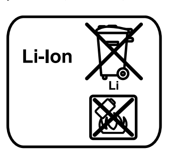
处理废弃物



必须以符合环保的方式，回收再利用损坏的电动工具，蓄电池，附件和废弃的包装材料。

不可以把电动工具和蓄电池 / 电池丢入一般的家庭垃圾中！

充电电池 / 电池：

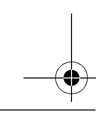
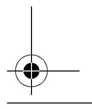
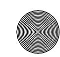
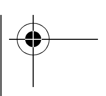
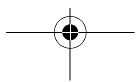
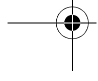
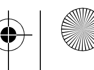


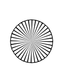
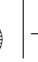
锂离子：
请注意 " 搬运 " 段落中的指示，页 31。

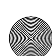
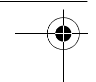
▶ **只有在处理损坏的蓄电池时，才可以从机器内拿出蓄电池。**打开机壳时，可能损坏电动工具。

拿出蓄电池之前，必须先按住起停开关 **7** 至蓄电池的电力完全放尽为止，接著再放开起停开关。拧出机壳上的螺丝并取下机壳。分离蓄电池上的接头，接著便可以拿出蓄电池。

保留修改权。


中文

安全規章

電動工具通用安全警告

⚠ 警告 **閱讀所有警告和所有說明。**不遵照以下警告和說明會導致電擊、著火和／或嚴重傷害。

保存所有警告和說明書以備查閱。

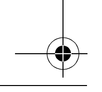
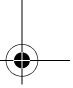
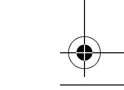
在所有下列的警告中術語 " 電動工具 " 指市電驅動 （有線）電動工具或電池驅動 （無線）電動工具。

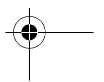
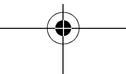
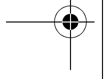
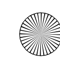
工作場地的安全

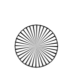
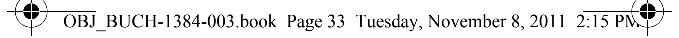
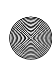
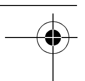
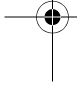
- ▶ **保持工作場地清潔和明亮。**混亂和黑暗的場地會引發事故。
- ▶ **不要在易爆環境，如有易燃液體、氣體或粉塵的環境下操作電動工具。**電動工具產生的火花會點燃粉塵或氣體。
- ▶ **讓兒童和旁觀者離開後操作電動工具。**注意力不集中會使你失去對工具的控制。

電氣安全

- ▶ **電動工具插頭必須與插座相配。絕不能以任何方式改裝插頭。**需接地的電動工具不能使用任何轉換插頭。未經改裝的插頭和相配的插座將減少電擊危險。
- ▶ **避免人體接觸接地表面，如管道、散熱片和冰箱。**如果你身體接地會增加電擊危險。
- ▶ **不得將電動工具暴露在雨中或潮濕環境中。**水進入電動工具將增加電擊危險。
- ▶ **不得濫用電線。絕不能用電線搬運、拉動電動工具或拔出其插頭。使電線遠離熱源、油、銳邊或運動部件。**受損或纏繞的軟線會增加電擊危險。
- ▶ **當在戶外使用電動工具時，使用適合戶外使用的外接軟線。**適合戶外使用的軟線，將減少電擊危險。

▶ **如果在潮濕環境下操作電動工具是不可避免的，應使用剩餘電流動作保護器 （RCD）。**使用 RCD 可減小電擊危險。

人身安全

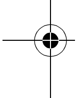
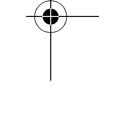
▶ **保持警覺，當操作電動工具時關注所從事的操作並保持清醒。當你感到疲倦，或在有藥物、酒精或治療反應時，不要操作電動工具。**在操作電動工具時瞬間的疏忽會導致嚴重人身傷害。

▶ **使用個人防護裝置。始終佩戴護目鏡。**安全裝置，諸如適當條件下使用防塵面具、防滑安全鞋、安全帽、聽力防護等裝置能減少人身傷害。



▶ **防止意外起動。確保開關在連接電源和 / 或電池盒、拿起或搬運工具時處於關斷位置。**手指放在已接通電源的開關上或開關處於接通時插入插頭可能會導致危險。

▶ **在電動工具接通之前，拿掉所有調節鑰匙或扳手。**遺留在電動工具旋轉零件上的扳手或鑰匙會導致人身傷害。

▶ **手不要伸展得太長。時刻注意立足點和身體平衡。**這樣在意外情況下能很好地控制電動工具。

▶ **著裝適當。不要穿寬鬆衣服或佩戴飾品。讓你的衣服、手套和頭髮遠離運動部件。**寬鬆衣服、佩飾或長髮可能會捲入運動部件中。

▶ **如果提供了與排屑、集塵設備連接用的裝置，要確保他們連接完好且使用得當。**使用這些裝置可減少塵屑引起的危險。

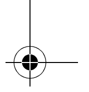
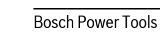
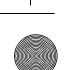
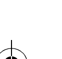
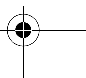
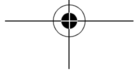
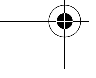
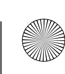
電動工具使用和注意事項

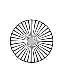
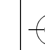
▶ **不要濫用電動工具，根據用途使用適當的電動工具。**選用適當設計的電動工具會使你工作更有效、更安全。

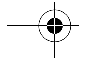
▶ **如果開關不能接通或關斷工具電源，則不能使用該電動工具。**不能用開關來控制的電動工具是危險的且必須進行修理。

▶ **在進行任何調節、更換附件或貯存電動工具之前，必須從電源上拔掉插頭和／或使電池盒與工具脫開。**這種防護性措施將減少工具意外起動的危險。

▶ **將閒置不用的電動工具貯存在兒童所及範圍之外，並且不要讓不熟悉電動工具或對這些說明不瞭解的人操作電動工具。**電動工具在未經培訓的用戶手中是危險的。



OBJ_BUCH-1384-003.book Page 34 Tuesday, November 8, 2011 2:15 PM


- ▶ **保養電動工具。檢查運動件是否調整到位或卡住，檢查零件破損情況和影響電動工具運行的其他狀況。如有損壞，電動工具應在使用前修理好。**許多事故由維護不良的電動工具引發。
- ▶ **保持切削刀具鋒利和清潔。**保養良好的有鋒利切削刃的刀具不易卡住而且容易控制。
- ▶ **按照使用說明書，考慮作業條件和進行的作業來使用電動工具、附件和工具的刀頭等。**將電動工具用於那些與其用途不符的操作可能會導致危險。

電池式工具使用和注意事項

- ▶ **只用製造商規定的充電器充電。**將適用於某種電池盒的充電器用到其他電池盒時會發生著火危險。
- ▶ **只有在配有專用電池盒的情況下才使用電動工具。**使用其他電池盒會發生損壞和著火危險。
- ▶ **當電池盒不用時，將它遠離其他金屬物體，例如回形針、硬幣、鑰匙、釘子、螺釘或其他小金屬物體，以防一端與另一端連接。**電池端部短路會引起燃燒或火災。
- ▶ **在濫用條件下，液體會從電池中濺出；避免接觸。如果意外碰到了，用水沖洗。如果液體碰到了眼睛，還要尋求醫療幫助。**從電池中濺出的液體會發生腐蝕或燃燒。

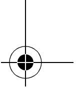
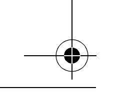


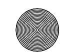
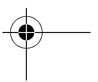
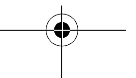
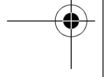
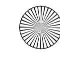
檢修

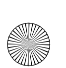
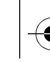
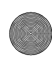
- ▶ **將你的電動工具送交專業維修人員，必須使用同樣的備件進行更換。**這樣將確保所維修的電動工具的安全性。

針對起子機的安全規章

- ▶ **工作時如果電動起子機可能割斷隱藏的電線，一定要握住絕緣手柄操作機器。**電動起子機如果接觸了帶電的線路，電動工具上的金屬部件會導電，可能造成操作者觸電。
- ▶ **務必握緊電動工具。**在擰緊和放松螺絲時，可能出現短暫的強大反擊。
- ▶ **等待電動工具完全靜止後才能夠放下機器。**機器上的工具可能在工作中被夾住，而令您無法控制電動工具。

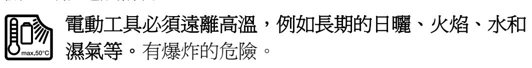






- **維修電動工具、更換電動工具上的工具或者搬運電動工具時，務必把正逆轉開關調整到中央的位置。**如果不小心啓動起停開關，可能造成傷害。



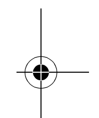
電動工具必須遠離高溫，例如長期的日曬、火焰、水和濕氣等。有爆炸的危險。

- **如果蓄電池損壞了，或者未按照規定使用蓄電池，蓄電池中會散發出有毒蒸汽。工作場所必須保持空氣流通，如果身體有任何不適必須馬上就醫。**蓄電池散發的蒸汽會刺激呼吸道。

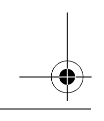
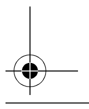
有關充電器的安全規章

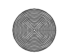
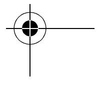
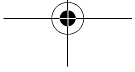
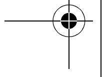
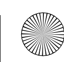
充電器必須遠離雨水或濕氣。如果讓水滲入充電器中，會提高觸電的危險。

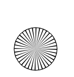
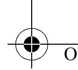
- **只能使用技術數據中提供的電壓，替博世的鋰離子蓄電池或安裝在博世產品上的蓄電池充電。** 否則有火災和爆炸的危險。
- **充電器必須保持清潔。**如果充電器上囤積污垢容易導致觸電。

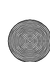


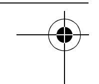
- **使用前必須檢查充電器、電線和插頭。如果發現故障則不可繼續使用充電器。不可擅自拆開充電器。充電器只能交給合格的專業電工修理，並且只能換裝原廠零件。**損壞的充電器、電線和插頭會提高使用者遭受電擊的危險。
- **充電時不可以把充電器放置在易燃的物品（例如紙，紡織品等）上。也不可以在易燃的環境中使用充電器。**充電時充電器會變熱，如果在上述狀況下使用充電器容易釀造火災。
- **看顧好兒童。**以確保兒童不會玩弄充電器。
- **兒童和成人如果因爲生理、感官、精神上的能力，或因爲缺乏經驗、知識而無法有把握地操作充電器，只能夠在相關負責人的監督下或指導下使用本充電器。**否則會造成操作錯誤並且有受傷的危險。

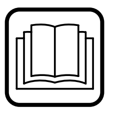
 





產品和功率描述



閱讀所有的警告提示和指示。如未確實遵循警告提示和指示，可能導致電擊、火災並且 / 或其他的嚴重傷害。

按照規定使用機器

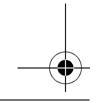
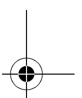
本電動工具適用于擰入和擰出螺絲。

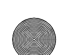
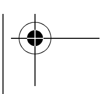
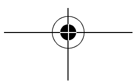
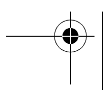
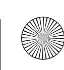
插圖上的機件

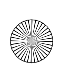
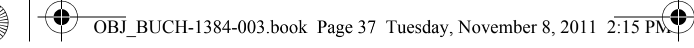
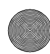
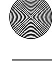
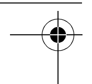
機件的編號和電動工具詳解圖上的編號一致。

1 螺絲批嘴*
2 工具接頭
3 橡膠蓋
4 正轉指示燈
5 蓄電池的充電電量指示燈
6 逆轉指示燈
7 起停開關
8 正逆轉開關
9 燈 " 照明燈 "
10 手柄 （絕緣握柄）
11 充電器
12 直角套筒*
13 扭力套筒*
14 扭力設定環*
15 設定扭力的記號*
16 解鎖環*

***圖表或說明上提到的附件，並不包含在基本的供貨範圍中。本公司的附件清單中有完整的附件供應項目。**

技術性數據

充電式起子機		IXO Professional
物品代碼		3 601 J60 2..
額定電壓	伏特＝	3,6
無負載轉速	次 / 分	180
根據 ISO 5393，硬擰轉 / 軟擰轉的最大扭力	牛頓米	4/3
最大螺絲直徑	毫米	5
重量符合 EPTA-Procedure 01/2003	公斤	0,3
蓄電池		**鋰離子**
容量	安培小時	1,3
蓄電池室的數目		1
充電器		
物品代碼		2 607 225 093
充電時間	小時	5
絕緣等級		▢/II

請認清電動工具銘牌上的物品代碼。電動工具在銷售市場上沒有 統一的商品名稱。

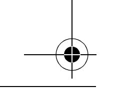
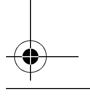
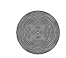
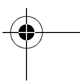
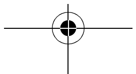
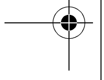
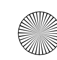
安裝

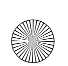
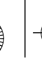
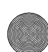
- **維修電動工具、更換電動工具上的工具或者搬運電動工具時，務必把正逆轉開關調整到中央的位置。**如果不小心啓動起停開關，可能造成傷害。

爲蓄電池充電 （參考插圖 A）

- **不可以使用其它廠牌的充電器。**附帶的充電器是電動工具上的鋰離子蓄電池的專用充電器。
- **注意電源的電壓！** 電源的電壓必須和充電器銘牌上標示的電壓數據一致。

指示： 蓄電池在交貨時只完成部分充電。首度使用電動工具之前，必須先充足蓄電池的電以確保蓄電池的功率。






可以隨時爲鋰離子蓄電池充電，不會縮短電池的使用壽命。如果充電過程突然中斷，也不會損壞電池。

鋰離子蓄電池不會過度放電。電池的電量如果用盡了，保護開關會自動關閉電動工具：此時電動工具會停止轉動，並且可以聽到輕微的警示聲響。

⚠ 注意 **電動工具被關閉之后，切勿繼續按住起停開關。**可能損壞電池。

當起停開關 **7 被按到一半的位置** 時 如果充電電量指示燈 **5** 亮起 **紅光**，代表蓄電池的現存電量已經不足 百分之三十，應該爲電池充電了。

在插好充電器的插頭，並且把充電式起子機裝入充電器 **11** 之后，充電器便開始充電。

充電電量指示燈 **5** 會顯示充電的過程。充電中指示燈會亮起 **綠燈**。如果充電電量指示燈 **5** 熄滅了，代表充電過程已經大功告成。

在充電過程中電動工具的手柄會變熱，這是正常的現象。

不使用充電器時必須中斷充電器的電源供應。

在充電過程中無法使用電動工具；如果在充電過程中電動工具沒有反應，並非機器故障了。

- ▶ **保護充電器，勿讓濕氣滲入！**

請注意有關作廢處理的規定。

更換工具 （參考插圖 B）

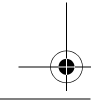
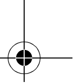
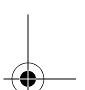
- ▶ **不可以使用長度超過 25 毫米 的雙端螺絲起子頭。**

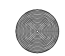
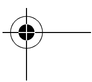
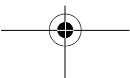
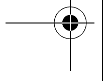
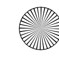
把螺絲批嘴 **1** 直接插入工具接頭 **2** 中。

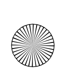
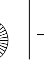
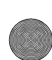
扭力套筒 / 直角套筒 (參考插圖 C – F)

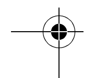
使用直角套筒 **12** 也可以在不易進入的位置擰入、擰出螺絲。

使用扭力設定環 **14** （位在扭力套筒 **13** 上）可以設定需要的扭力，總共有 10 個扭力選檔。如果扭力設定正確，只要螺絲頭已經平貼在工件表面，或者到達了預定的扭力，安裝在機器上的工具便會停止轉動。


安裝（參考插圖 C–D）

安裝套筒時先向前拉出橡膠蓋 **3**，接著便可以裝上套筒。您也可以把套筒轉動 45 °後再安裝。

操作（參考插圖 E–F）

拆卸套筒時要先擰轉解鎖環 **16**（要朝著 ❶ 的方向擰轉），並向前拉出套筒。接著再裝回橡膠蓋 **3**。

操作

操作機器

改變轉向

使用正逆轉開關 **8** 可以改變機器的轉向。如果按住了起停開關 **7**，則無法改變轉向。

正轉 : 適用于擰入螺絲，把正逆轉開關 **8** 向左推到底。

在按下起停開關 **7** 而且馬達開始轉動後，正轉指示燈 **4** 便會亮起。

逆轉 : 適用于擰松或擰出螺絲，把正逆轉開關 **8** 向右推到底。

在按下起停開關 **7** 而且馬達開始轉動後，逆轉指示燈 **6** 便會亮起。

開動 / 關閉

操作電動工具時先按下電動工具的 起停開關 **7**，並持續按著。

輕按或是把起停開關 **7** 按到底時燈 **9** 會亮起。在照明狀況不佳的環境中可以借此照亮操作位置。

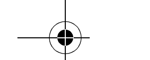
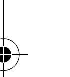
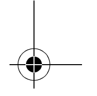
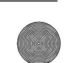
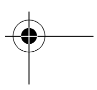
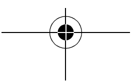
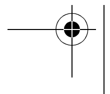
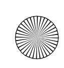
放開起停開關 **7** 便可以 **關閉** 電動工具。

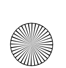
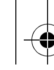
全自動的主軸鎖定功能 (Auto-Lock)

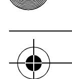
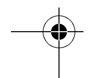
如果未按下起停開關 **7** 主軸會被鎖定。

因此，即使蓄電池沒電了，也可以使用本電動工具擰入螺絲，換句話說，也可以使用本機器充當螺絲起子。

▶ **當主軸被堵住時，如果繼續按住起停開關 7 超過 15 秒，可能會損壞電動工具。**

有關操作方式的指點

- ▶ **確定電動工具已經關閉了，才可以把電動工具頂在螺絲頭上。** 轉動中的起子頭容易從螺絲頭上滑開。

充電器 **11** 上有可以安插 13 個螺絲批嘴的存放槽。這個存放槽是活動的可以取出。

固定充電器 （參考插圖 G）

您可以把充電器 **11** 固定在牆上。固定時可以把充電器側面的凹槽套入牆上的 2 個螺絲中。



維修和服務

維修和清潔

- ▶ **維修電動工具、更換電動工具上的工具或者搬運電動工具時，務必把正逆轉開關調整到中央的位置。** 如果不小心啓動起停開關，可能造成傷害。
- ▶ **電動工具和通風間隙都必須保持清潔，這樣才能夠提高工作品質和安全性。**

如果蓄電池故障了，可以向博世電動工具公司授權的客戶服務中心求援。

如果必須更換連接線，務必把這項工作交給博世或 者經授權的博世電動工具顧客服務執行，以避免危害機器的安全性能。

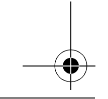
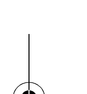
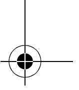
本公司生產的電動工具都經過嚴密的品質檢驗，如果機器仍然發生故障，請將機器交給博世電動工具公司授權的顧客服務處修理。

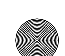
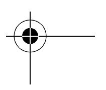
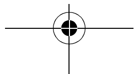
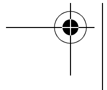
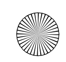
詢問和訂購備件時，務必提供機器銘牌上標示的 10 位數物品代碼。

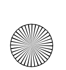
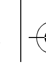
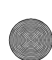
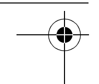
顧客服務處和顧客咨詢中心

本公司顧客服務處負責回答有關本公司產品的修理，維護和備件的問題。以下的網頁中有爆炸圖和備件的資料：
www.bosch-pt.com

博世顧客咨詢團隊非常樂意爲您解答有關購買，使用和設定本公司產品及附件的問題。

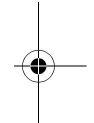






台灣
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台北市 10491
電話 : +886 (2) 2515 5388
傳真 : +886 (2) 2516 1176
www.bosch-pt.com.tw

制造商地址：
羅伯特博世有限公司
營業範圍電動工具
郵箱號碼 100156
70745 Leinfelden-Echterdingen （萊菲登 - 艾希德登）
Deutschland （德國）

搬運



隨著機器一起供貨的鋰離子蓄電池必須受危險物品法規範。使用者無須另外使用保護包裝便可以運送該蓄電池。
但是如果將它交由第三者運送 （例如：寄空運或委托運輸公司）則要使用特殊的包裝和標示。此時必須向危險物品專家請教有關寄送危險物品的相關事宜。

處理廢棄物



必須以符合環保的方式，回收再利用損壞的電動工具，蓄電池，附件和廢棄的包裝材料。

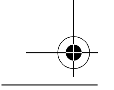
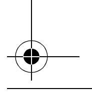
不可以把電動工具和蓄電池 / 電池丟入一般的家庭垃圾中！

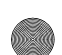
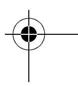
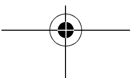
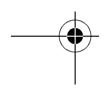
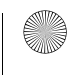
蓄電池 / 一般電池：

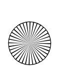
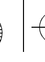
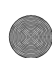
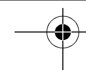
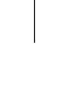


鋰離子：
請注意 " 搬運 " 段落中的指示，頁 41。

▶ **只有在處理損壞的蓄電池時，才可以從機器內拿出蓄電池。**打開機殼時，可能損壞電動工具。

拿出蓄電池之前，必須先按住起停開關 **7** 至蓄電池的電力完全放盡爲止，接著再放開起停開關。擰出機殼上的螺絲並取下機殼。分離蓄電池上的接頭，接著便可以拿出蓄電池。

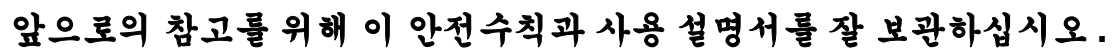
保留修改權。

한국어

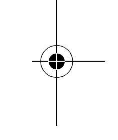
안전 수칙

전동공구용 일반 안전수칙

⚠ 경고 **모든 안전수칙과 지시 사항을 상세히 읽고 지켜야 합니다.** 다음의 안전수칙과 지시 사항을 준수하지 않으면 화재 위험이 있으며 감전 혹은 중상을 입을 수 있습니다.



앞으로의 참고를 위해 이 안전수칙과 사용 설명서를 잘 보관하십시오.



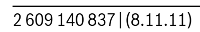
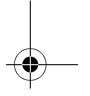
다음에서 사용되는 " 전동공구 " 라는 개념은 전원에 연결하여 사용하는 전동 기기 (전선이 있는) 나 배터리를 사용하는 전동 기기 (전선이 없는) 를 의미합니다.

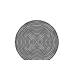
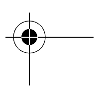
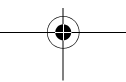
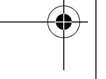
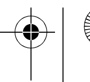
작업장 안전

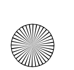
- ▶ **작업장을 항상 깨끗이 하고 조명을 밝게 하십시오.** 작업장 환경이 어수선하거나 어두우면 사고를 초래할 수 있습니다.
- ▶ **가연성 유체, 가스 또는 분진이 있어 폭발 위험이 있는 환경에서 전동공구를 사용하지 마십시오.** 전동공구는 분진이나 증기에 점화하는 스파크를 일으킬 수 있습니다.
- ▶ **전동공구를 사용할 때 구경꾼이나 어린이 혹은 다른 사람이 작업장에 접근하지 못하게 하십시오.** 다른 사람이 주의를 산만하게 하면 기기에 대한 통제를 잃기 쉽습니다.

전기에 관한 안전

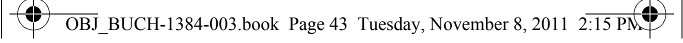
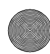
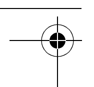
- ▶ **전동공구의 전원 플러그가 전원 콘센트에 잘 맞아야 합니다. 플러그를 조금이라도 변경시켜서는 안됩니다. 접지된 전동공구를 사용할 때 어댑터 플러그를 사용하지 마십시오.** 변형되지 않은 플러그와 잘 맞는 콘센트를 사용하면 감전의 위험을 감소할 수 있습니다.



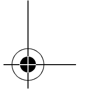
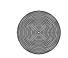
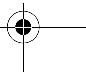
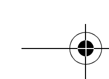
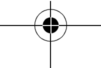
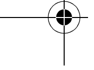
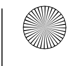


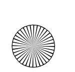
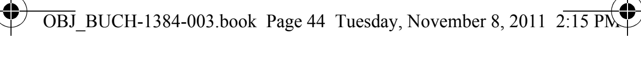




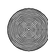
- **파이프 관, 라디에이터, 레인지, 냉장고와 같은 접지 표면에 몸이 닿지 않도록 하십시오.** 몸에 닿을 경우 감전될 위험이 높습니다.
- **전동공구를 비에 맞지 않게 하고 습기 있는 곳에 두지 마십시오.** 전동공구에 물이 들어가면 감전될 위험이 높습니다.
- **전원 코드를 잡고 전동공구를 운반하거나 걸어 놓아서는 안되며, 콘센트에서 전원 플러그를 뽑을 때 전원 코드를 잡아 당겨서는 절대로 안됩니다. 전원 코드가 열과 오일에 접촉하는 것을 피하고, 날카로운 모서리나 기기의 가동 부위에 닿지 않도록 주의하십시오.** 손상되거나 엉킨 전원 코드는 감전을 유발할 수 있습니다.
- **실외에서 전동공구로 작업할 때는 실외용으로 적당한 연장 전원 코드만을 사용하십시오.** 실외용 연장 전원 코드를 사용하면 감전의 위험을 줄일 수 있습니다.
- **전동공구를 습기 찬 곳에서 사용해야 할 경우에는 누전 차단기를 사용하십시오.** 누전 차단기를 사용하면 감전 위험을 줄일 수 있습니다.

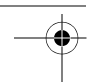
사용자 안전

- **신중하게 작업하십시오. 작업을 할 때 주의를 하며, 전동공구를 사용할 때 경솔하게 행동하지 마십시오. 피로한 상태이거나 약물 복용 및 음주한 후에는 전동공구를 사용하지 마십시오.** 전동공구를 사용할 때 잠시라도 주의가 산만해지면 중상을 입을 수 있습니다.
- **작업자 안전을 위한 장치를 사용하십시오. 항상 보안경을 착용하십시오.** 전동공구의 종류와 사용에 따라 먼지 보호 마스크, 미끄러지지 않는 안전한 신발, 안전모 또는 귀마개 등의 안전한 복장을 하면 상해의 위험을 줄일 수 있습니다.
- **실수로 기기가 작동되지 않도록 주의하십시오. 전동공구를 전원에 연결하거나 배터리를 끼우기 전에, 혹은 기기를 들거나 운반하기 전에, 전원 스위치가 꺼져 있는 지 다시 확인하십시오.** 전동공구를 운반할 때 전원 스위치에 손가락을 대거나 전원 스위치가 켜진 상태에서 전원을 연결하면 사고 위험이 높습니다.
- **전동공구를 사용하기 전에 조절하는 툴이나 나사 키 등을 빼 놓으십시오.** 회전하는 부위에 있는 툴이나 나사 키로 인해 상처를 입을 수 있습니다.

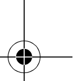
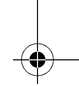
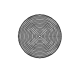
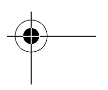
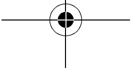
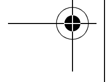
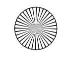


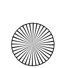
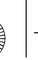
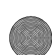


- **자신을 과신하지 마십시오. 불안정한 자세를 피하고 항상 평형을 이룬 상태로 작업하십시오.** 안정된 자세와 평형한 상태로 작업해야만이 의외의 상황에서도 전동공구를 안전하게 사용할 수 있습니다.
- **알맞은 작업복을 입으십시오. 헐렁한 복장을 하거나 장신구를 착용하지 마십시오. 머리나 옷 또는 장갑이 가동하는 기기 부위에 가까이 닿지 않도록 주의하십시오.** 헐렁한 복장, 장신구 혹은 긴 머리는 가동부위에 말려 사고를 초래할 수 있습니다.
- **분진 추출장치나 수거장치의 조립이 가능한 경우, 이 장치가 연결되어 있는 지, 제대로 작동이 되는 지 확인하십시오.** 이러한 분진 추출장치를 사용하면 분진으로 인한 사고 위험을 줄일 수 있습니다.

전동공구의 올바른 사용과 취급

- **기기를 과부하 상태에서 사용하지 마십시오. 작업을 하는 데 이에 적당한 전동공구를 사용하십시오.** 알맞은 전동공구를 사용하면 지정된 성능 한도 내에서 더 효율적으로 안전하게 작업할 수 있습니다.
- **전원 스위치가 고장 난 전동공구를 사용하지 마십시오.** 전원 스위치가 작동되지 않는 전동공구는 위험하므로, 반드시 수리를 해야 합니다.
- **기기에 세팅을 하거나 액세서리 부품을 교환하거나 혹은 기기를 보관할 때, 항상 전원 콘센트에서 플러그를 미리 빼어 놓으십시오.** 이러한 조치는 실수로 전동공구가 작동하게 되는 것을 예방합니다.
- **사용하지 않는 전동공구는 어린이 손이 닿지 않는 곳에 보관하고, 전동공구 사용에 익숙지 않거나 이 사용 설명서를 읽지 않은 사람은 기기를 사용해서는 안됩니다.** 경험이 없는 사람이 전동공구를 사용하면 위험합니다.
- **전동공구를 조심스럽게 관리하십시오. 가동 부위가 하자 없이 정상적인 기능을 하는지, 걸리는 부위가 있는지, 혹은 전동공구의 기능에 중요한 부품이 손상되지 않았는지 확인하십시오. 손상된 기기의 부품은 전동공구를 다시 사용하기 전에 반드시 수리를 맡기십시오.** 제대로 관리하지 않은 전동공구의 경우 많은 사고를 유발합니다.
- **절단 공구를 날카롭고 깨끗하게 관리하십시오.** 날카로운 절단면이 있고 잘 관리된 절단공구는 걸리는 경우가 드물고 조절하기도 쉽습니다.
- **전동공구, 액세서리, 장착하는 공구 등을 사용할 때, 이 지시 사항과 특별히 기종 별로 나와있는 사용 방법을 준수하십시오. 이때 작업 조건과 실시하려는 작업 내용을 고려하십시오.** 원래 사용 분야가 아닌 다





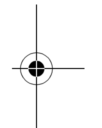
른 작업에 전동공구를 사용할 경우 위험한 상황을 초래할 수 있습니다.

충전 전동공구의 올바른 사용과 취급

- ▶ **배터리를 충전할 때 제조 회사가 추천하는 충전기만을 사용하여 재충전해야 합니다.** 특정 제품의 배터리를 위하여 제조된 충전기에 적합하지 않은 다른 배터리를 충전할 경우 화재 위험이 있습니다.
- ▶ **각 전동공구용으로 나와있는 배터리만을 사용하십시오.** 다른 종류의 배터리를 사용하면 상해를 입거나 화재를 초래할 수 있습니다.



- ▶ **배터리를 사용하지 않을 때는, 각 극 사이에 브리징 상태가 생길 수 있으므로 페이퍼 클립, 동전, 열쇠, 못, 나사 등 유사한 금속성 물체와 멀리하여 보관하십시오.** 배터리 극 사이에 쇼트가 일어나 화상을 입거나 화재를 야기할 수 있습니다.
- ▶ **배터리를 잘못 사용하면 누수가 생길 수 있습니다. 누수가 생긴 배터리에 닿지 않도록 하십시오. 피부에 접하게 되었을 경우 즉시 물로 씻으십시오. 유체가 눈에 닿았을 경우 바로 의사와 상담하십시오.** 배터리에서 나오는 유체는 피부에 자극을 주거나 화상을 입힐 수 있습니다.

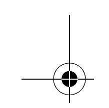
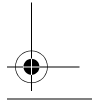


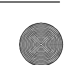
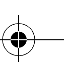
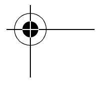
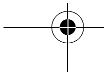
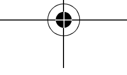
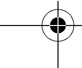
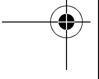
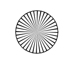
서비스

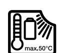
- ▶ **전동공구 수리는 반드시 전문 인력에게 맡기고, 수리 정비 시 보쉬 순정 부품만을 사용하십시오.** 그렇게 함으로서 기기의 안전성을 오래 유지할 수 있습니다.

스크류 드라이버용 안전 수칙

- ▶ **작업할 때 볼트로 보이지 않는 전선에 닿을 위험이 있으면 전동공구의 절연된 손잡이 면을 잡으십시오.** 볼트가 전류가 흐르는 전선에 접하게 되면 기기의 금속 부위에 전기가 통해 감전될 위험이 있습니다.
- ▶ **전동공구를 꽉 잡으십시오.** 스크류를 조이거나 풀 때 일시적으로 강한 반동력이 생길 수 있습니다.
- ▶ **전동공구를 내려놓기 전에 기기가 완전히 멈추었는지를 확인하십시오.** 펀치가 걸리거나 전동공구에 대한 통제가 어려워질 수 있습니다.
- ▶ **전동공구에 정비를 하거나 비트 등을 교환하기 전에, 혹은 기기를 운반하거나 보관할 때 회전방향 선택 스위치를 반드시 중간 위치에 두십시오.** 실수로 전원 스위치가 작동하여 상해를 입을 수 있습니다.

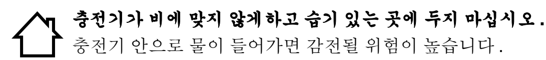











전동공구를 태양 광선에 두는 등 고열에 장시간 노출되지 않도록 하고, 불과 물 그리고 수분이 있는 곳에 두지 마십시오. 폭발 위험이 있습니다.

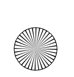
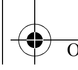
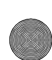
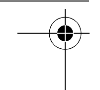
- **배터리가 손상되었거나 잘못 사용될 경우 증기가 발생할 수 있습니다. 작업장을 환기시키고, 필요한 경우 의사와 상담하십시오.** 증기로 인해 호흡기가 자극될 수 있습니다.

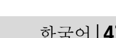
충전기 안전수칙



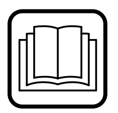
충전기가 비에 맞지 않게하고 습기 있는 곳에 두지 마십시오. 충전기 안으로 물이 들어가면 감전될 위험이 높습니다.

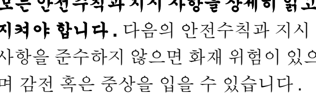
- **제품 사양에 나와있는 전압에 해당하는 보쉬 리튬 이온 배터리나 보쉬 제품에 장착된 배터리만을 충전해야 합니다.** 그렇지 않으면 화재나 폭발의 위험이 있습니다.
- **충전기를 깨끗이 유지하십시오.** 오염으로 인해 감전될 위험이 있습니다.
- **사용하기 전에 항상 충전기, 전원 코드 그리고 플러그에 이상이 없는지 확인하십시오. 충전기가 손상되었으면 절대로 사용하지 마십시오. 충전기를 열지 말고 전문 기사에게 맡겨 보쉬 정식 부품만을 사용하여 수리하도록 하십시오.** 손상된 충전기, 전원 코드 및 플러그를 사용하면 감전될 위험이 높습니다.
- **충전기를 쉽게 발화하는 표면 (종이나 직물 등) 위나 가연성 물질이 있는 곳에서 사용하지 마십시오.** 충전 과정 중에 충전기가 뜨거워지므로 화재 위험이 있습니다.
- **어린이들을 잘 감독하십시오.** 어린이들이 충전기를 갖고 놀지 않도록 하십시오.
- **안전 담당 책임자가 본 충전기 사용에 관한 관리와 지시를 하지 않은 경우, 어린이들을 포함하여, 신체적 및 정신적 능력과 감각 기능에 장애가 있는 사람 혹은 경험이 없거나 기기 사용법을 모르는 사람이 사용해서는 안됩니다.** 그렇지 않을 경우 오작동과 상해의 위험이 있습니다.



제품 및 성능 소개



모든 안전수칙과 지시 사항을 상세히 읽고 지켜야 합니다. 다음의 안전수칙과 지시 사항을 준수하지 않으면 화재 위험이 있으며 감전 혹은 중상을 입을 수 있습니다.

규정에 따른 사용

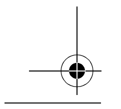
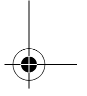
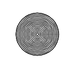
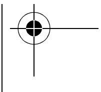
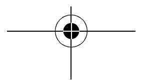
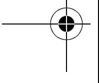
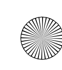
본 전동공구는 나사못을 조이거나 푸는 작업을 하는데 사용해야 합니다.

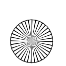
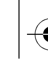
제품의 주요 명칭

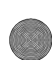
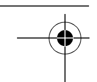
제품의 주요 명칭에 표기되어 있는 번호는 기기 그림이 나와있는 면을 참고하십시오.

1 스크류 드라이버 비트*
2 툴 홀더
3 고무 캡
4 정회전 회전 방향 표시기
5 배터리 충전 상태 표시기
6 역회전 회전 방향 표시기
7 전원 스위치
8 회전방향 선택 스위치
9 " 파워 라이트 " 램프
10 손잡이 (절연된 손잡이 부위)
11 충전기
12 앵글 드라이버 헤드*
13 토크 부착 부품*
14 토크 설정 링*
15 토크 조절용 표시*
16 해제 링*

***도면이나 설명서에 나와있는 액세서리는 표준 공급부품에 속하지 않습니다. 전체 액세서리는 저희 액세서리 프로그램을 참고하십시오.**

제품 사양

충전 스크류 드라이버		IXO Professional
제품 번호		3 601 J60 2..
정격 전압	V=	3.6
무부하 속도	rpm	180
ISO 5393 에 따른 경질 / 연질 스크류작업 시 최대 토크	Nm	4/3
나사못 직경 , 최대	mm	5
EPTA 공정 01/2003 에 따른 중량	kg	0.3
배터리		**리튬 이온**
용량	Ah	1.3
배터리 개수		1
충전기		
제품 번호		2 607 225 093
충전 시간	h	5
안전 등급		▢/II

전동공구의 명판에 표시된 제품 번호를 확인하십시오 . 각 전동공구의 명칭이 시중에서 상이하게 사용될 수 있습니다 .

조립

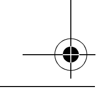
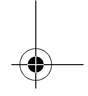
▶ **전동공구에 정비를 하거나 비트 등을 교환하기 전에 , 혹은 기기를 운반하거나 보관할 때 회전방향 선택 스위치를 반드시 중간 위치에 두십시오 .** 실수로 전원 스위치가 작동하여 상해를 입을 수 있습니다 .

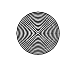
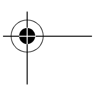
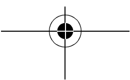
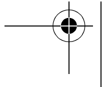
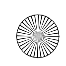
배터리 충전하기 (그림 A 참조)

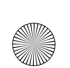
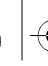
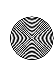
▶ **다른 충전기를 사용하지 마십시오 .** 함께 공급되는 충전기는 귀하의 전동공구에 장착된 리튬 이온 배터리에 맞게 되어 있습니다 .

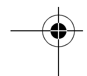
▶ **공공 배전 전압에 주의 !** 공급되는 전원의 전압은 충전기의 명판에 표기된 전압과 일치해야 합니다 .

참고 : 배터리는 일부 충전되어 공급됩니다 . 배터리의 성능을 완전하게 보장하기 위해서는 처음 사용하기 전에 배터리를 완전히 충전기에 충전하십시오 .

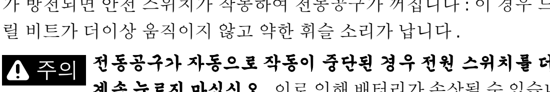






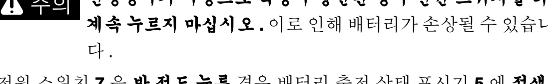




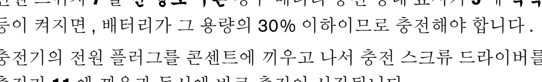


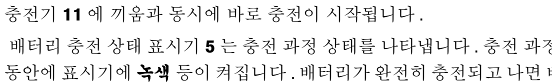

리튬 이온 배터리는 항상 충전할 수 있으며, 이로 인해 수명이 단축되지 않습니다. 충전을 하다 중간에 중지해도 배터리가 손상되지 않습니다.

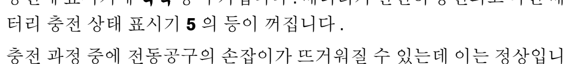
리튬 이온 배터리는 과도한 방전이 되지 않도록 되어 있습니다. 배터리가 방전되면 안전 스위치가 작동하여 전동공구가 꺼집니다: 이 경우 드릴 비트가 더이상 움직이지 않고 약한 휘슬 소리가 납니다.

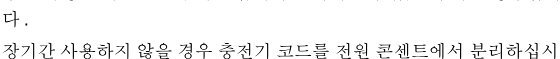

⚠ 주의 **전동공구가 자동으로 작동이 중단된 경우 전원 스위치를 더 계속 누르지 마십시오.** 이로 인해 배터리가 손상될 수 있습니다.


전원 스위치 **7** 을 **반 정도 누른** 경우 배터리 충전 상태 표시기 **5** 에 **적색** 등이 켜지면, 배터리가 그 용량의 30% 이하이므로 충전해야 합니다.


충전기의 전원 플러그를 콘센트에 끼우고 나서 충전 스크류 드라이버를 충전기 **11** 에 끼움과 동시에 바로 충전이 시작됩니다.


배터리 충전 상태 표시기 **5** 는 충전 과정 상태를 나타냅니다. 충전 과정 동안에 표시기에 **녹색** 등이 켜집니다. 배터리가 완전히 충전되고 나면 배터리 충전 상태 표시기 **5** 의 등이 꺼집니다.


충전 과정 중에 전동공구의 손잡이가 뜨거워질 수 있는데 이는 정상입니다.


장기간 사용하지 않을 경우 충전기 코드를 전원 콘센트에 분리하십시오.

충전 중에는 전동공구를 사용할 수 없습니다; 충전하는 동안 기기가 작동하지 않는 것은 고장이 아닙니다.

- ▶ **충전기가 젖지 않도록 하십시오!**

처리에 관련된 지시 사항을 준수하십시오.

액세서리의 교환 (그림 B 참조)

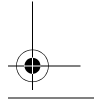
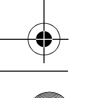
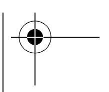
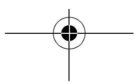
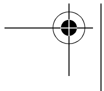
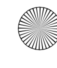
- ▶ **25 mm 이상의 양면 스크류 드라이버 비트를 사용하지 마십시오.**

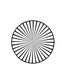
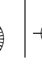
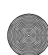
스크류 드라이버 비트 **1** 을 직접 툴 홀더 **2** 에 끼우십시오.

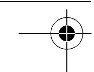
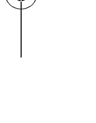
토크 부착 부품 / 앵글 드라이버 헤드 (그림 C – F 참조)

앵글 드라이버 헤드 **12** 를 사용하면 접근하기 어려운 부위에도 스크류작업을 할 수 있습니다.

토크 부착 부품 **13** 에 있는 토크 설정 링 **14** 를 사용하여 필요한 토크를 10 단계 중에서 설정할 수 있습니다. 올바로 설정된 경우 나사못이 소재

와 일직선으로 조여지거나 설정된 토크에 이르면 비트가 자동으로 정지 합니다.

조립 (그림 C–D 참조)

부착 부품을 조립하려면 우선 고무 캡 **3** 을 앞으로 당겨 뺀 후에 부착 부품을 끼우십시오. 부착 부품은 **45°** 기울여 조립할 수 있습니다.

분해 (그림 E–F 참조)

부착 부품을 탈착하려면 해제 링 **16** 을 회전 방향 ❶ 로 돌리고 나서 부착 부품을 앞으로 빼십시오. 그리고 나서 고무 캡 **3** 을 다시 끼우십시오.

작동

기계 시동

회전방향 설정하기

회전방향 선택 스위치 **8** 로 기기의 회전 방향을 선택할 수 있습니다. 그러나 전원 스위치 **7** 이 눌려진 상태에서는 작동이 불가능합니다.

정회전 : 나사못을 조이려면 회전방향 선택 스위치 **8** 을 왼쪽으로 끝까지 밉니다.



전원 스위치 **7** 을 작동하여 모터가 돌아가면 정회전 회전 방향 표시기 **4** 가 켜집니다.

역회전 : 나사못을 풀거나 빼려면 회전방향 선택 스위치 **8** 을 오른쪽으로 끝까지 밉니다.



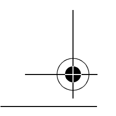
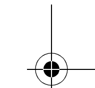
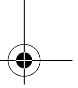
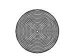
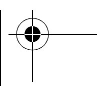
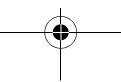
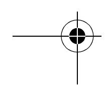
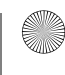
전원 스위치 **7** 을 작동하여 모터가 돌아가면 역회전 회전 방향 표시기 **6** 이 켜집니다.

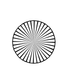
전원 스위치 작동

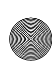
전동공구를 **작동하려면** 전원 스위치 **7** 을 누르고 누른 상태를 유지하십시오.

전원 스위치 **7** 을 살짝 누르거나 완전히 누르면 램프 **9** 가 켜지므로 조명 상태가 좋지 않은 곳에서도 작업이 가능합니다.

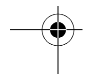
전동공구의 **스위치를 끄려면** 전원 스위치 **7** 을 놓으면 됩니다.





OBJ_BUCH-1384-003.book Page 51 Tuesday, November 8, 2011 2:15 PM




전자동 스핀들 잠금장치 (Auto-Lock)

전원 스위치 **7** 을 누르지 않은 상태에서는 드릴 스핀들이 잠겨 있습니다.

이로 인해 방전 상태의 배터리로 나사못을 조이는 것과 전동공구를 스크류 드라이버로 사용하는 것이 가능합니다.

- ▶ **드릴 스핀들이 잠겨진 상태에서 전원 스위치 7 을 15 초 이상 누르지 마십시오. 그렇지 않으면 전동공구가 손상될 수 있습니다.**

사용방법

- ▶ **전동공구의 스위치가 꺼진 상태에서만 나사못에 대십시오.** 회전하는 드릴 비트가 미끄러질 수 있습니다.

충전기 **11** 의 측면에 13 개까지 스크류 드라이버 비트를 보관할 수 있습니다. 스크류 드라이버 비트 툴 홀더를 빼낼 수 있습니다.

충전기 고정하기 (그림 G 참조)

충전기 **11** 을 벽에 고정할 수 있습니다. 양쪽의 홈을 두 개의 나사에 걸면 됩니다.



보수 정비 및 서비스

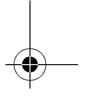
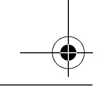
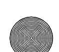
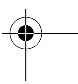
보수 정비 및 유지

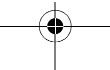
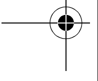
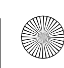
- ▶ **전동공구에 정비를 하거나 비트 등을 교환하기 전에, 혹은 기기를 운반하거나 보관할 때 회전방향 선택 스위치를 반드시 중간 위치에 두십시오.** 실수로 전원 스위치가 작동하여 상해를 입을 수 있습니다.
- ▶ **안전하고 올바른 작동을 위하여 전동공구와 전동공구의 통풍구를 항상 깨끗이 하십시오.**

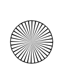
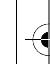
배터리 기능에 문제가 있으면 보쉬 지정 전동공구 서비스 센터에 문의하십시오.

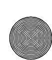
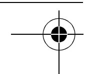
연결 코드를 교환해야 할 경우 안전을 기하기 위해 보쉬사나 보쉬 지정 전동공구 서비스 센터에 맡겨야 합니다.

세심한 제작과 검사에도 불구하고 전동공구가 불량한 경우가 있다면 보쉬 고객 지원본부나 가까운 보쉬 지정 전동공구 서비스 센터에 수리를 의뢰하십시오.

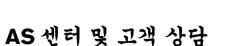



문의 사항이 있거나 스페어 부품을 주문할 때 반드시 전동공구의 타입 표시판에 적힌 10 자리의 제품 번호를 알려 주십시오.

AS 센터 및 고객 상담

AS 센터에서는 귀하 제품의 수리 및 보수정비, 그리고 부품에 관한 문의를 받고 있습니다. 제품의 분해도 및 부품에 관한 정보는 다음의 주소에서도 보실 수 있습니다:
www.bosch-pt.com
보쉬 AS 센터 팀은 제품과 액세서리의 구매, 사용법 및 설정에 관해 상담해 드립니다.

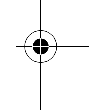


한국로버트보쉬기전주식회사

Robert Bosch Korea Mechanics and Electronics Ltd.

전동공구 사업부

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전화 : +82 31 270 – 4143/4148/4620
팩스 : +82 31 270 – 4144

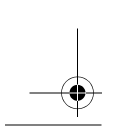
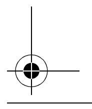


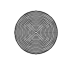
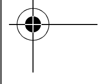
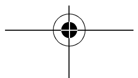
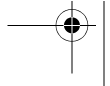
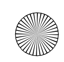
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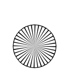
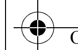
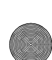
전화 : +82 31 270 – 4680/4681/4682
팩스 : +82 31 270 – 4686
E-Mail: Bosch-pt.hotline@kr.bosch.com
Internet: www.bosch-pt.co.kr

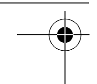
운반

포함되어 있는 리튬 이온 배터리는 위험물 관련 규정을 따라야 합니다. 사용자가 별도의 요구사항 없이 배터리를 직접 도로 상에서 운반할 수 있습니다.
제 3 자를 통해 운반할 경우 (항공 운송이나 운송 회사 등) 포장과 표기에 관한 특별한 요구 사항을 준수해야 합니다. 이 경우 발송 준비를 위해 위험물 전문가와 상담해야 합니다.



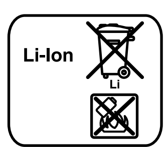
처리



전동공구, 배터리, 액세서리 및 포장은 환경 친화적인 방법으로 재생할 수 있도록 분류하십시오.

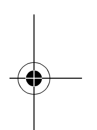
전동공구와 충전용 배터리 / 배터리를 가정용 쓰레기로 처리하지 마십시오!

충전용 배터리 / 배터리:



Li-Ion:

" 운반 " 내용에 나와 있는 주의 사항을 준수하십시오, 52 면.



▶ **내장된 배터리는 폐기 처리할 경우에만 꺼내십시오.** 하우징 쉘을 열면 전동공구가 손상되거나 파괴될 수 있습니다.



배터리를 전동공구에서 빼려면 배터리가 완전히 방전될 때까지 전원 스위치 **7** 을 작동하십시오. 하우징에 있는 나사를 풀고 하우징 커버를 빼냅니다. 배터리의 연결 부위를 분리하고 배터리를 꺼내십시오.

위 사항은 사전 예고 없이 변경될 수도 있습니다.

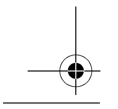
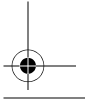
ภาษาไทย

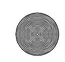
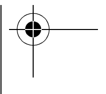
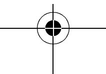
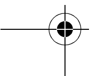
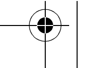
กฎระเบียบเพื่อความปลอดภัย

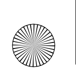
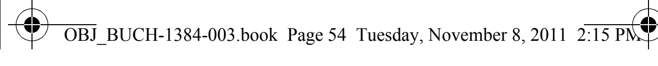
คำเตือนทั่วไปเพื่อความปลอดภัยในการใช้เครื่องมือไฟฟ้า

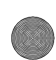
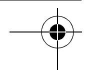
⚠ คำเตือน **ต้องอ่านคำเตือนเพื่อความปลอดภัยและคำสั่งทั้งหมด** การไม่ปฏิบัติตามคำเตือนและคำสั่งอาจเป็นสาเหตุให้ถูกไฟฟ้าดูด เกิดไฟไหม้ และ/หรือได้รับบาดเจ็บอย่างร้ายแรง

เก็บรักษาคำเตือนและคำสั่งทั้งหมดสำหรับเปิดอ่านในภายหลัง

คำว่า "เครื่องมือไฟฟ้า" ในคำเตือนหมายถึง เครื่องมือไฟฟ้าของท่านที่ทำงานด้วยพลังงานไฟฟ้าที่ต่อจากเต้าเสียบ (มีสายไฟฟ้า) และเครื่องมือไฟฟ้าที่ทำงานด้วยพลังงานไฟฟ้าจากแบตเตอรี่ (ไร้สาย)



ความปลอดภัยในสถานที่ทำงาน

▶ **รักษาสถานที่ทำงานให้สะอาดและมีไฟส่องสว่างดี** สถานที่ที่มืดหรือรกรุงรังนำมาซึ่งอุบัติเหตุ

▶ **อย่าใช้เครื่องมือไฟฟ้าในสภาพแวดล้อมที่เสี่ยงต่อการติดระเบิดได้ เช่น ในที่ที่มีของเหลว แก๊ซ หรือ ฝุ่นที่ติดไฟได้** เมื่อใช้เครื่องมือไฟฟ้าจะเกิดประกายไฟซึ่งอาจจุดฝุ่นหรือไอให้ลุกเป็นไฟได้

▶ **ขณะใช้เครื่องมือไฟฟ้าทำงาน ต้องกันเด็กและผู้ยืนดู ให้ออกห่าง** การหันเหความสนใจอาจทำให้ท่านขาดการควบคุมเครื่องได้

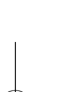
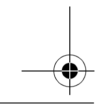
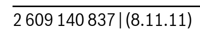
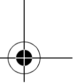
ความปลอดภัยเกี่ยวกับไฟฟ้า

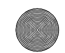
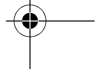
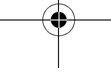
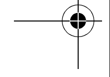
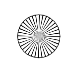
▶ **ปลั๊กของเครื่องมือไฟฟ้าต้องมีขนาดพอดีกับเต้าเสียบ อย่าดัดแปลงหรือแก้ไขตัวปลั๊กอย่างเด็ดขาด อย่าต่อปลั๊กต่อใด ๆ เข้ากับเครื่องมือไฟฟ้าที่มีสายดิน** ปลั๊กที่ไม่ดัดแปลงและเต้าเสียบที่เข้ากันช่วยลดความเสี่ยงจากการถูกไฟฟ้าดูด

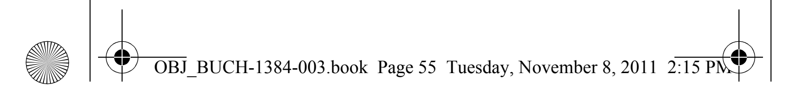
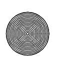
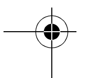
▶ **หลีกเลี่ยงไม่ให้ร่างกายสัมผัสกับพื้นผิวของสิ่งของที่ต่อสายดินไว้ เช่น ท่อ เครื่องทำความร้อน เตา และตู้เย็น** จะเสี่ยงอันตรายจากการถูกไฟฟ้าดูดมากขึ้นหากกระแสไฟฟ้าวิ่งผ่านร่างกายของท่านลงดิน

▶ **อย่าวางเครื่องมือไฟฟ้าตากฝนหรือทิ้งไว้ในที่ชื้นแฉะ** หากน้ำเข้าในเครื่องมือไฟฟ้า จะเพิ่มความเสี่ยงจากการถูกไฟฟ้าดูด

▶ **อย่าใช้สายไฟฟ้าอย่างผิด ๆ อย่าถือเครื่องมือไฟฟ้าที่สาย อย่าใช้สายแขวนเครื่อง หรืออย่าดึงสายไฟฟ้าเพื่อถอดปลั๊กออกจากเต้าเสียบ กันสายไฟฟ้าออกห่างจากความร้อน น้ำมัน ขอบแหลมคม หรือส่วนของเครื่องที่กำลังเคลื่อนไหว** สายไฟฟ้าที่ชำรุดหรือพันกันยุ่งเพิ่มความเสี่ยงจากการถูกไฟฟ้าดูด

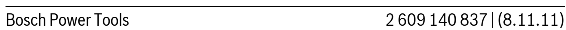
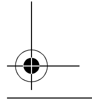
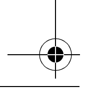
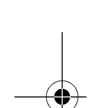
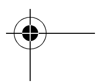
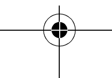
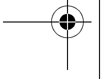
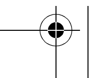
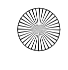






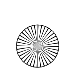




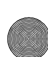
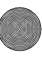
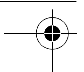
- **เมื่อใช้เครื่องมือไฟฟ้าทำงานกลางแจ้ง ให้ใช้สายไฟต่อที่ได้รับการรับรองให้ใช้ต่อในที่กลางแจ้งเท่านั้น** การใช้สายไฟต่อที่เหมาะสมสำหรับงานกลางแจ้งช่วยลดอันตรายจากการถูกไฟฟ้าดูด
- **หากไม่สามารถหลีกเลี่ยงการใช้เครื่องมือไฟฟ้าทำงานในสถานที่เปียกชื้นได้ ให้ใช้สวิทช์ตัดวงจรเมื่อเกิดการรั่วไหลของไฟฟ้าจากสายดิน** การใช้สวิทช์ตัดวงจรเมื่อเกิดการรั่วไหลของไฟฟ้าจากสายดินช่วยลดความเสี่ยงต่อการถูกไฟฟ้าดูด

ความปลอดภัยของบุคคล

- **ท่านต้องอยู่ในสภาพเตรียมพร้อม ระมัดระวังในสิ่งที่กำลังทำอยู่และมีสติขณะใช้เครื่องมือไฟฟ้าทำงาน อย่าใช้เครื่องมือไฟฟ้าขณะที่ท่านกำลังเหนื่อย หรืออยู่ภายใต้การครอบงำของฤทธิ์ของยาเสพติด แอลกอฮอล์ และยา** เมื่อใช้เครื่องมือไฟฟ้าทำงาน ในชั่วนาทีที่ท่านขาดความเอาใจใส่อาจทำให้บุคคลบาดเจ็บอย่างรุนแรงได้
- **ใช้อุปกรณ์ปกป้องร่างกาย สวมแว่นตาป้องกันเสมอ** อุปกรณ์ปกป้อง เช่น หน้ากากกันฝุ่น รองเท้ากันลื่น หมวกแข็ง หรือประกบหูกันเสียงดัง ที่เลือกใช้ตามความเหมาะสมกับสภาพการทำงาน สามารถลดอันตรายต่อบุคคลได้
- **ป้องกันการติดเครื่องโดยไม่ตั้งใจ ต้องดูให้แน่ใจว่าสวิทช์อยู่ในตำแหน่งปิดก่อนเสียบปลั๊กไฟเข้าในเต้าเสียบ และ/หรือใส่แท่งแบตเตอรี่ ยกขึ้นหรือถือเครื่องมือ** การถือเครื่องโดยใช้นิ้วหิ้วที่สวิทช์ หรือเสียบพลังไฟฟ้าขณะสวิทช์เปิดอยู่ อาจนำไปสู่อุบัติเหตุที่ร้ายแรงได้
- **เอาเครื่องมือปรับแต่งหรือประแจปากตายออกจาก เครื่องมือไฟฟ้าก่อนเปิดสวิทช์** เครื่องมือหรือประแจปากตายที่วางอยู่กับส่วนของเครื่องที่กำลังหมุนจะทำให้บุคคลบาดเจ็บได้
- **หลีกเลี่ยงการตั้งท่าที่ผิดปกติ ตั้งท่ายืนที่มั่นคงและวางน้ำหนักให้สมดุลตลอดเวลา** ในลักษณะนี้ท่านสามารถควบคุมเครื่องมือไฟฟ้าในสถานการณ์ที่ไม่คาดคิดได้ดีกว่า
- **ใส่เสื้อผ้าที่เหมาะสม อย่าใส่เสื้อผ้าหลวมหรือสวมเครื่องประดับ เอาผม เสื้อผ้า และถุงมือออกห่างส่วนของเครื่องที่กำลัง**




หมุน เสื้อผ้าหลวม เครื่องประดับ และผมยาวอาจเข้าไปติดในส่วนของเครื่องที่กำลังหมุนได้

▶ **หากต้องต่อเครื่องมือไฟฟ้าเข้ากับเครื่องดูดฝุ่นหรือเครื่องเก็บผง ดูให้แน่ใจว่าการเชื่อมต่อและการใช้งานเป็นไปอย่างถูกต้อง** การใช้อุปกรณ์ดูดฝุ่นช่วยลดอันตรายที่เกิดจากฝุ่นได้

การใช้และการดูแลรักษาเครื่องมือไฟฟ้า

▶ **อย่าใช้เครื่องมือไฟฟ้าอย่างหักโหม ใช้เครื่องมือไฟฟ้าที่ถูกต้องตรงตามลักษณะงาน** เครื่องมือไฟฟ้าที่ถูกต้องจะทำงานได้ดีกว่าและปลอดภัยกว่าในระดับสมรรถภาพที่ออกแบบไว้

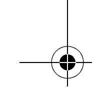
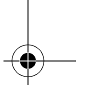
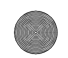
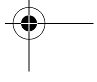
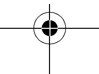
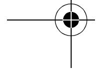
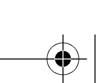
▶ **อย่าใช้เครื่องมือไฟฟ้าที่สวิทช์เปิดปิดเสีย** เครื่องมือไฟฟ้าที่ไม่สามารถควบคุมการเปิดปิดด้วยสวิทช์ได้ เป็นเครื่องมือไฟฟ้าที่ไม่ปลอดภัยและต้องส่งซ่อมแซม

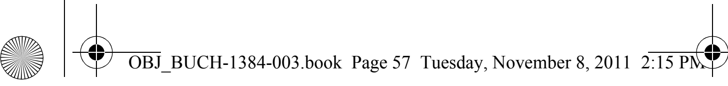
▶ **ก่อนปรับแต่งเครื่อง เปลี่ยนอุปกรณ์ประกอบ หรือเก็บเครื่องเข้าที่ ต้องถอดปลั๊กไฟออกจากเต้าเสียบ และ/หรือถอดแท่งแบตเตอรี่ออกจากเครื่องมือไฟฟ้า** มาตรการป้องกันเพื่อความปลอดภัยนี้ช่วยลดความเสี่ยงจากการติดเครื่องโดยไม่ได้ตั้งใจ

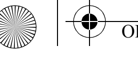
▶ **เมื่อเลิกใช้งานเครื่องมือไฟฟ้า ให้เก็บเครื่องไว้ในที่ที่เด็กหยิบไม่ถึงและไม่อนุญาตให้บุคคลที่ไม่คุ้นเคยกับเครื่องหรือบุคคลที่ไม่ได้อ่านคำแนะนำนี้ใช้เครื่อง** เครื่องมือไฟฟ้าเป็นของอันตรายหากตกอยู่ในมือของผู้ใช้ที่ไม่ได้รับการฝึกฝน

▶ **เอาใจใส่ดูแลรักษาเครื่อง ตรวจหาส่วนที่เคลื่อนไหวได้ของเครื่องว่าวางอยู่ตรงแนวหรือติดขัดหรือไม่ ตรวจหาการแตกหักของชิ้นส่วนและสภาพอื่นใดที่อาจมีผลต่อการทำงานของเครื่องมือไฟฟ้า หากชำรุดต้องส่งเครื่องมือไฟฟ้าซ่อมแซมก่อนใช้งาน** อุบัติเหตุหลายอย่างเกิดขึ้นเนื่องจากดูแลรักษาเครื่องไม่ดีพอ

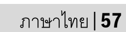
▶ **รักษาเครื่องมือตัดให้คมและสะอาด** หากบำรุงรักษาเครื่องมือที่มีขอบตัดแหลมคมอย่างถูกต้อง จะสามารถตัดได้ลื่นไม่ติดขัดและควบคุมได้ง่ายกว่า







▶ **ใช้เครื่องมือไฟฟ้า อุปกรณ์ประกอบ เครื่องมือ และอุปกรณ์อื่นๆ ให้ตรงตามคำแนะนำนี้ และในลักษณะตามที่เครื่องมือไฟฟ้าประเภทนั้นๆ กำหนดไว้โดยต้องคำนึงถึงเงื่อนไขการทำงานและงานที่จะทำด้วย** การใช้เครื่องมือไฟฟ้าทำงานที่ต่างไปจากวัตถุประสงค์การใช้งานของเครื่องอาจนำไปสู่สถานการณ์ที่เป็นอันตรายได้

การใช้และการดูแลรักษาเครื่องที่ใช้แบตเตอรี่

▶ **ชาร์จแบตเตอรี่ด้วยเครื่องชาร์จที่บริษัทผู้ผลิตระบุไว้เท่านั้น** เครื่องชาร์จที่เหมาะสำหรับชาร์จแบตเตอรี่ประเภทหนึ่ง หากนำไปชาร์จแบตเตอรี่ประเภทอื่น อาจเกิดไฟไหม้ได้

▶ **ใช้แบตเตอรี่เฉพาะประเภทที่เครื่องมือไฟฟ้ากำหนดให้ใช้ได้** การใช้แบตเตอรี่ประเภทอื่นเสี่ยงต่อการเกิดไฟไหม้หรือบาดเจ็บ

▶ **เมื่อไม่ใช้แบตเตอรี่ ให้เก็บแบตเตอรี่ไว้ห่างโลหะวัตถุอื่นๆ เช่น คลิปหนีบกระดาษ เหรียญ กุญแจ ตะปู สกรู หรือโลหะวัตถุขนาดเล็กอื่นๆ ที่สามารถต่อขั้วหนึ่งไปยังอีกขั้วหนึ่งได้** การลัดวงจรของขั้วแบตเตอรี่อาจทำให้เกิดการไหม้หรือไฟลุกได้

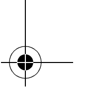
▶ **เมื่อใช้แบตเตอรี่ผิดวิธี อาจมีของเหลวไหลออกมาจากแบตเตอรี่ได้ ให้หลีกเลี่ยงการสัมผัสของเหลว หากสัมผัสโดยบังเอิญ ให้ใช้น้ำล้าง หากของเหลวเข้าตา ให้ขอความช่วยเหลือจากแพทย์ด้วย** ของเหลวที่ไหลออกมาจากแบตเตอรี่อาจทำให้เกิดอาการคันหรือแสบผิวหนังได้

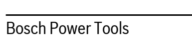
การบริการ

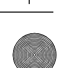
▶ **ส่งเครื่องมือไฟฟ้าให้ช่างผู้เชี่ยวชาญตรวจซ่อมและใช้อะไหล่เปลี่ยนของแท้เท่านั้น** ในลักษณะนี้ท่านจะแน่ใจได้ว่าเครื่องมือไฟฟ้าอยู่ในสภาพที่ปลอดภัย

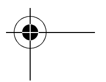
คำเตือนเพื่อความปลอดภัยสำหรับไขควง

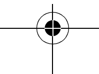
▶ **เมื่อทำงานในบริเวณที่สกรูอาจสัมผัสกับสายไฟฟ้าที่ซ่อนอยู่ ต้องจับเครื่องมือไฟฟ้าตรงด้ามจับที่หุ้มฉนวน** หากสกรูสัมผัสกับสายที่มีกระแสไฟฟ้าไหลผ่านจะทำให้ส่วนที่เป็นโลหะของเครื่องมือไฟฟ้าเกิดมีกระแสไฟฟ้าด้วย และส่งผลให้ผู้ใช้เครื่องถูกไฟฟ้าดูดได้

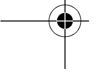


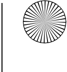


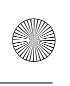
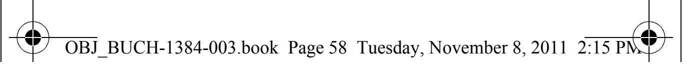


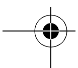








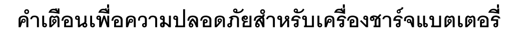




- **จับเครื่องมือไฟฟ้าให้แน่น** ขณะขันสกรูเข้าและคลายออกอาจเกิดแรงบิดสะท้อนช่วงสั้นๆ อย่างรุนแรงได้
- **ก่อนวางเครื่องลงบนพื้นทุกครั้ง ต้องรอให้เครื่องหยุดนิ่งอยู่กับที่เสมอ** มิฉะนั้นเครื่องมือที่ใส่อยู่อาจติดขัดและนำไปสู่การสูญเสียการควบคุมเครื่องมือไฟฟ้า
- **ก่อนปรับแต่งเครื่อง (ต. ย. เช่น การบำรุงรักษา การเปลี่ยนเครื่องมือ ฯลฯ) รวมทั้งเมื่อเคลื่อนย้ายและเก็บเข้าที่ ให้ตั้งสวิทช์ปรับทิศทางหมุนไว้ที่ตำแหน่งกลางเสมอ** หากสวิทช์เปิด-ปิดถูกกดโดยไม่เจตนา อาจทำให้บุคคลบาดเจ็บได้



ปกป้องเครื่องมือไฟฟ้าจากความร้อน ต.ย. เช่น แสงแดดจัดต่อเนื่อง ไฟ น้ำ และความชื้น อัตรายจากการระเบิด

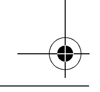
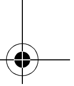
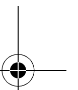
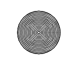
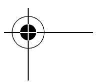
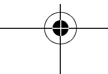
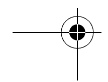
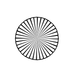


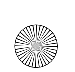
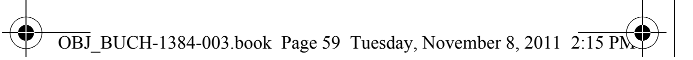
- **ในกรณีที่แบตเตอรี่ชำรุดและใช้แบตเตอรี่อย่างไม่ถูกต้อง อาจมีไอระเหยออกมา ให้สูดอากาศบริสุทธิ์ และหาแพทย์ในกรณีเจ็บปวด** ไอระเหยอาจทำให้ระบบหายใจระคายเคือง

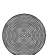
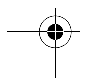
คำเตือนเพื่อความปลอดภัยสำหรับเครื่องชาร์จแบตเตอรี่


หลีกเลี่ยงอย่าให้เครื่องชาร์จแบตเตอรี่ถูกฝนหรือความชื้น การซึมผ่านของน้ำเข้าในเครื่องชาร์จแบตเตอรี่เพิ่มความเสี่ยงต่อการถูกไฟฟ้าดูด

- **ชาร์จเฉพาะแบตเตอรี่ลิเธียม ไอออน ของบ๊อช หรือแบตเตอรี่ที่ติดตั้งอยู่ในผลิตภัณฑ์ บ๊อช ที่มีแรงดันไฟฟ้าตามที่ระบุไว้ในข้อมูลทางเทคนิคเท่านั้น** มิฉะนั้นจะมีอันตรายจากการเกิดไฟไหม้และการระเบิด
- **รักษาเครื่องชาร์จแบตเตอรี่ให้สะอาด** ความสกปรกอาจทำให้เกิดอันตรายจากไฟฟ้าดูดได้
- **ตรวจสอบเครื่องชาร์จแบตเตอรี่ สายไฟฟ้า และปลั๊กไฟ ทุกครั้งก่อนใช้งาน อย่าใช้เครื่องชาร์จแบตเตอรี่ที่ตรวจพบข้อบกพร่อง อย่าเปิดเครื่องชาร์จแบตเตอรี่เอง ต้องส่งเครื่องให้ช่างผู้เชี่ยวชาญซ่อมแซมและใช้อะไหล่ของแท้เท่านั้น** เครื่องชาร์จแบตเตอรี่ สายไฟฟ้า และปลั๊กไฟที่ชำรุด เพิ่มความเสี่ยงต่อการถูกไฟฟ้าดูด

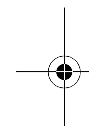









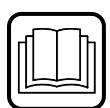



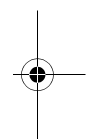
- ▶ **อย่าใช้เครื่องชาร์จแบตเตอรี่บนพื้นผิวที่ติดไฟง่าย (ต. ย. เช่น กระดาษ สิ่งทอ และอื่นๆ) หรือในสภาพแวดล้อมที่ไวไฟ** ความร้อนของเครื่องชาร์จแบตเตอรี่ในกระบวนการชาร์จอาจเป็นเหตุให้เกิดอันตรายจากไฟไหม้ได้
- ▶ **ควบคุมดูแลเด็กๆ** เพื่อให้แน่ใจว่าเด็กๆ จะไม่เล่นเครื่องชาร์จ
- ▶ **เด็กหรือบุคคลที่มีข้อบกพร่องทางจิต ทางกายภาพ หรือข้อบกพร่องในการรับความรู้สึก หรือขาดประสบการณ์หรือความรู้ จะไม่สามารถใช้งานเครื่องชาร์จได้อย่างปลอดภัย บุคคลเหล่านี้สามารถใช้เครื่องชาร์จนี้ได้เฉพาะเมื่ออยู่ภายใต้การควบคุมดูแล หรือเมื่อได้รับการชี้แนะจากผู้รับผิดชอบแล้วเท่านั้น** มิฉะนั้นจะมีอันตรายจากความผิดพลาดในการปฏิบัติงานและได้รับบาดเจ็บ

รายละเอียดผลิตภัณฑ์และข้อมูลจำเพาะ





ต้องอ่านคำเตือนเพื่อความปลอดภัยและคำสั่งทั้งหมด การไม่ปฏิบัติตามคำเตือนและคำสั่งอาจเป็นสาเหตุให้ถูกไฟฟ้าดูด เกิดไฟไหม้ และ/หรือได้รับบาดเจ็บอย่างร้ายแรง



ประโยชน์การใช้งานของเครื่อง

เครื่องนี้ใช้สำหรับขันสกรูเข้าและคลายสกรูออก

ส่วนประกอบผลิตภัณฑ์

ลำดับเลขของส่วนประกอบผลิตภัณฑ์อ้างถึงส่วนประกอบของเครื่องที่แสดงในหน้าภาพประกอบ

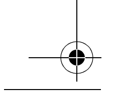
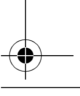
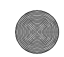
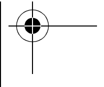
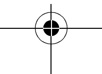
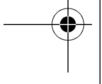
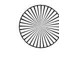
1 ดอกไขควง*

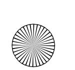
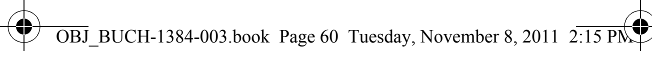
2 ด้ามจับเครื่องมือ

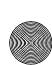
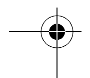
3 ฝาครอบยาง

4 ไฟแสดงการหมุนทางขวา

5 ไฟแสดงสภาวะการชาร์จแบตเตอรี่

6 ไฟแสดงการหมุนทางซ้าย

7 สวิทช์เปิด-ปิด

8 สวิทช์เปลี่ยนทิศทางการหมุน

9 หลอดไฟ "Power Light"

10 ด้ามจับ (พื้นผิวจับหุ้มฉนวน)

11 เครื่องชาร์จแบตเตอรี่

12 หัวไขควงมุม*

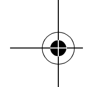
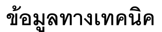
13 ตัวเสียบทอร์ค*

14 แหวนตั้งแรงบิดล่วงหน้า*

15 แรงบิด-เครื่องหมายการตั้งค่า*

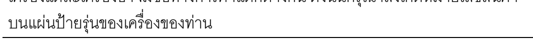
16 แหวนปลด*

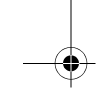
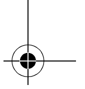
***อุปกรณ์ประกอบที่แสดงหรือระบุไม่รวมอยู่ในการจัดส่งมาตรฐาน กรุณาดูอุปกรณ์ประกอบทั้งหมดในรายการแสดงอุปกรณ์ประกอบของเรา**

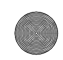
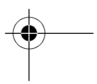
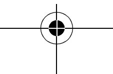
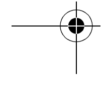
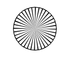



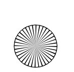
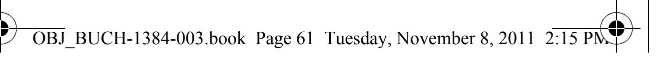
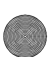
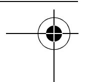
ข้อมูลทางเทคนิค

ไขควงไร้สาย		IXO Professional
หมายเลขสินค้า		3 601 J60 2..
แรงดันไฟฟ้ากำหนด	V=	3,6
ความเร็วรอบเดินตัวเปล่า	รอบ/นาที	180
แรงบิดสูงสุดสำหรับการขันสกรูแบบแข็ง/แบบนุ่ม ตาม ISO 5393	Nm	4/3
Ø-สกรู สูงสุด	มม.	5
น้ำหนักตามระเบียบการ-EPTA-Procedure 01/2003	กก.	0,3


เครื่องแต่ละเครื่องอาจมีชื่อทางการค้าแตกต่างกัน ดังนั้นกรุณาสังเกตหมายเลขสินค้าบนแผ่นป้ายรุ่นของเครื่องของท่าน

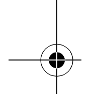



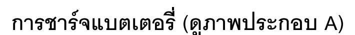
ไขควงไร้สาย		IXO Professional
แบตเตอรี่		Li-ion
ความจุ	แอมแปร์-ชั่วโมง	1,3
จำนวนเซลล์ในแบตเตอรี่		1
เครื่องชาร์จแบตเตอรี่		
หมายเลขสินค้า		2 607 225 093
เวลาชาร์จ	ชั่วโมง	5
ระดับความปลอดภัย		□ / II

เครื่องแต่ละเครื่องอาจมีชื่อทางการค้าแตกต่างกัน ดังนั้นกรุณาสังเกตหมายเลขสินค้าบนแผ่นป้ายรุ่นของเครื่องของท่าน



การประกอบ

- ▶ **ก่อนปรับแต่งเครื่อง (ต. ย. เช่น การบำรุงรักษา การเปลี่ยนเครื่องมือ ฯลฯ) รวมทั้งเมื่อเคลื่อนย้ายและเก็บเข้าที่ ให้ตั้งสวิทช์ปรับทิศทางหมุนไว้ที่ตำแหน่งกลางเสมอ** หากสวิทช์เปิด-ปิดถูกกดโดยไม่เจตนา อาจทำให้บุคคลบาดเจ็บได้

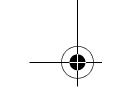
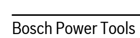
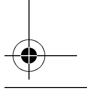
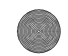
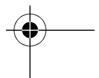
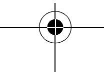
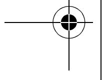
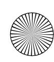


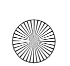
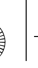
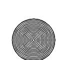
การชาร์จแบตเตอรี่ (ดูภาพประกอบ A)

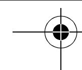
- ▶ **อย่าชาร์จแบตเตอรี่ประเภทอื่น** เครื่องชาร์จแบตเตอรี่ที่จัดส่งได้รับการออกแบบสำหรับชาร์จแบตเตอรี่ลิเธียม-ไอออนในเครื่องของท่าน
- ▶ **ให้สังเกตแรงดันไฟฟ้า!** แรงดันไฟฟ้าจากแหล่งจ่ายไฟฟ้าต้องมีค่าตรงกับค่าแรงดันไฟฟ้าที่ระบุไว้บนแผ่นป้ายพิกัดเครื่องชาร์จแบตเตอรี่

หมายเหตุ: แบตเตอรี่ที่จัดส่งได้รับการชาร์จไฟไว้บ้างแล้ว เพื่อให้แบตเตอรี่ทำงานได้เต็มประสิทธิภาพ ต้องชาร์จแบตเตอรี่ในเครื่องชาร์จแบตเตอรี่ให้เต็มก่อนใช้งานเครื่องมือไฟฟ้าของท่านเป็นครั้งแรก

แบตเตอรี่ลิเธียม ไอออน สามารถชาร์จได้ทุกเวลาโดยอายุการใช้งานจะไม่ลดลง การขัดจังหวะกระบวนการชาร์จไม่ทำให้แบตเตอรี่เสียหาย

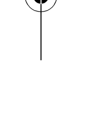



แบตเตอรี่ลิเธียม-ไอออนมีระบบป้องกันไม่ให้จ่ายกระแสไฟฟ้าออกลึก เมื่อแบตเตอรี่ปล่อยกระแสไฟฟ้าออกหมด วงจรป้องกันจะปิดสวิทช์เครื่องโดยอัตโนมัติ: เครื่องมือที่ใส่อยู่จะไม่หมุนต่อ และจะได้ยินเสียงหวีดเบาๆ

⚠ คำเตือน **หลังจากเครื่องดับสวิทช์โดยอัตโนมัติ อย่ากดสวิทช์เปิด-ปิดต่อ** แบตเตอรี่อาจเสียหายได้

หากไฟแสดงสภาวะการชาร์จแบตเตอรี่ 5 ติดขึ้น **สีแดง** ขณะสวิทช์เปิด-ปิด 7 ถูก**กดลงครึ่งทาง** แสดงว่าแบตเตอรี่มีไฟฟ้าน้อยกว่า 30 % ของความจุเต็มที่ของแบตเตอรี่และควรชาร์จไฟ

กระบวนการชาร์จเริ่มต้นในทันทีที่เสียบปลั๊กไฟหลักของเครื่องชาร์จแบตเตอรี่เข้าในเต้าเสียบ และจากนั้นได้วางไขควงไร้สายเข้าบนเครื่องชาร์จแบตเตอรี่ 11 แล้ว



ไฟแสดงสภาวะการชาร์จแบตเตอรี่ 5 บ่งบอกถึงความคืบหน้าของการชาร์จแบตเตอรี่ ไฟแสดงสภาวะจะติดขึ้น **สีเขียว** ในระหว่างกระบวนการชาร์จ หากไฟแสดงสภาวะการชาร์จแบตเตอรี่ 5 ไม่ติดอีกต่อไปแสดงว่าแบตเตอรี่ถูกชาร์จเต็มแล้ว



ในระหว่างกระบวนการชาร์จ ด้ามจับของเครื่องจะอุ่นขึ้น นี่คือเรื่องปกติ

เมื่อไม่ใช้เครื่องชาร์จแบตเตอรี่เป็นเวลานาน ให้ปลดเครื่องออกจากแหล่งจ่ายไฟหลัก

เครื่องมือไฟฟ้าไม่สามารถใช้งานได้ในระหว่างกระบวนการชาร์จ เครื่องไม่ได้เสียหากทำงานไม่ได้ในระหว่างกระบวนการชาร์จ

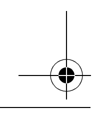
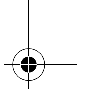
▶ **ปกป้องเครื่องชาร์จแบตเตอรี่จากความชื้น!**

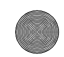
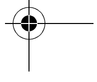
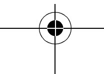
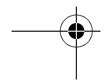
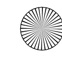
อ่านและปฏิบัติตามข้อสังเกตสำหรับการกำจัดขยะ

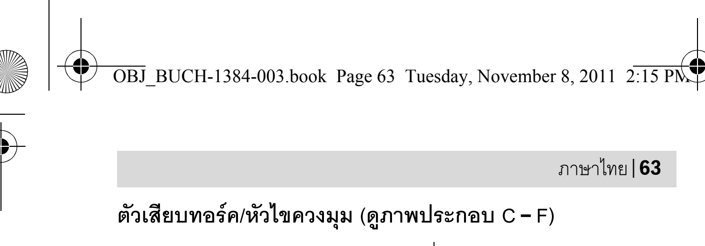
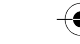
การเปลี่ยนเครื่องมือ (ดูภาพประกอบ B)

▶ **อย่าใช้ใบไขควงชนิดสองด้านที่ยาวกว่า 25 มม.**

ใส่ดอกไขควง 1 เข้าในด้ามจับเครื่องมือ 2 โดยตรง


ตัวเสียบทอร์ค/หัวไขควงมุม (ดูภาพประกอบ C – F)



หัวไขควงมุม 12 ทำให้สามารถขันสกรูตรงจุดที่เข้าถึงยาก

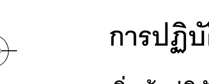
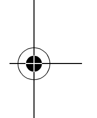
แหวนตั้งแรงบิดล่วงหน้า 14 บนตัวเสียบทอร์ค 13 ใช้สำหรับตั้งแรงบิดที่ต้องการ และสามารถตั้งล่วงหน้าได้ 10 ขั้น เมื่อการตั้งค่าถูกต้อง เครื่องมือจะหยุดในทันทีที่สกรูถูกขันเรียบเข้าในวัสดุ หรือเมื่อถึงแรงบิดที่ตั้งไว้

การประกอบ (ดูภาพประกอบ C – D)

เมื่อต้องการประกอบตัวเสียบ ให้ดึงฝาครอบยาง 3 ออกไปด้านหน้า หลังจากนั้นจึงสามารถใส่ตัวเสียบได้ ตัวเสียบสามารถประกอบเอียงไป 45°

การถอด (ดูภาพประกอบ E – F)

เมื่อต้องการถอดตัวเสียบออก ให้หมุนแหวนปลด 16 ไปในทิศทางหมุน ❶ และดึงตัวเสียบออกไปด้านหน้า หลังจากนั้นจึงประกอบฝาครอบยาง 3 เข้าที่เดิม

การปฏิบัติงาน

เริ่มต้นปฏิบัติงาน

การกลับทิศทางการหมุน

สวิทช์เปลี่ยนทิศทางการหมุน 8 ใช้สำหรับกลับทิศทางการหมุนของเครื่อง อย่างไรก็ดี หากกดสวิทช์เปิด-ปิด 7 อยู่ จะกลับทิศทางการหมุนไม่ได้

การหมุนทางขวา: สำหรับการขันสกรูเข้า ให้สับสวิทช์เปลี่ยนทิศทางการหมุน 8 ไปทางซ้ายจนสุด

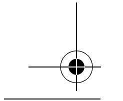
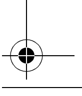
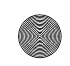
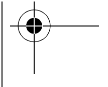
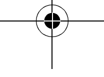
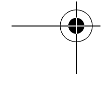
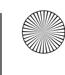


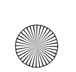
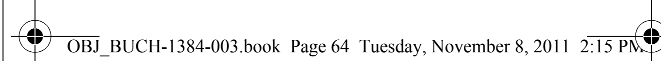
ไฟแสดงการหมุนทางขวา 4 จะติดขึ้นเมื่อกดสวิทช์เปิด-ปิด 7 และมอเตอร์วิ่ง

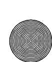
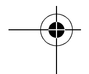
การหมุนทางซ้าย: สำหรับการคลายหรือขันสกรูออก ให้สับสวิทช์เปลี่ยนทิศทางการหมุน 8 ไปทางขวาจนสุด



ไฟแสดงการหมุนทางซ้าย 6 จะติดขึ้นเมื่อกดสวิทช์เปิด-ปิด 7 และมอเตอร์วิ่ง

การเปิด-ปิดเครื่อง

เปิดเครื่องทำงานโดยกดสวิทซ์เปิด-ปิด 7 และกดค้างไว้

หลอดไฟ 9 จะติดขึ้นเมื่อกดสวิทซ์เปิด-ปิด 7 เข้าเพียงเล็กน้อยหรือกดจนมิด และบริเวณทำงานจะส่องสว่างเมื่อตรงนั้นมีสภาพแสงที่ไม่ดี

ปิดเครื่องโดย**ปล่อยนิ้ว**จากสวิทซ์เปิด-ปิด 7

ล็อคแกนด้วยระบบอัตโนมัติทั้งหมด (auto-lock)

เมื่อไม่กดสวิทซ์เปิด-ปิด 7 แกนสว่านจะถูกล็อค

ในลักษณะนี้ ท่านสามารถขันสกรูเข้าได้แม้แบตเตอรี่หมดไฟแล้ว และใช้เครื่องมือไฟฟ้าเป็นไขควงได้

▶ **เมื่อแกนสว่านถูกล็อค ต้องไม่กดสวิทซ์เปิด-ปิด 7 เป็นเวลากว่า 15 วินาที มิฉะนั้นเครื่องมือไฟฟ้าจะเสียหาย**

ข้อแนะนำในการทำงาน

▶ **จับเครื่องมือไฟฟ้าวางบนสกรูเมื่อเครื่องปิดอยู่เท่านั้น** เครื่องมือที่กำลังหมุนอยู่สามารถทำให้ลื่นไถลได้

ท่านสามารถเก็บสำรองดอกไขควงได้ถึง 13 ดอกบนด้านข้างของเครื่องชาร์จแบตเตอรี่ 11 อุปกรณ์บรรจุดอกไขควงสามารถถอดออกได้

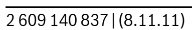
การยึดเครื่องชาร์จแบตเตอรี่กับผนังห้อง (ดูภาพประกอบ G)

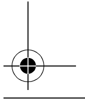
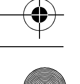
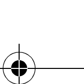
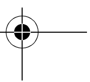
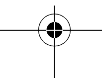
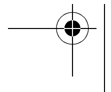
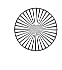
เครื่องชาร์จแบตเตอรี่ 11 สามารถยึดติดกับผนังห้องได้ โดยแขวนเครื่องชาร์จตรงช่องเปิดที่ด้านข้างไว้บนสกรูสองตัว

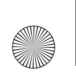
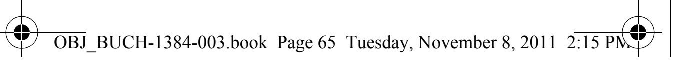
การบำรุงรักษาและการบริการ

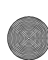
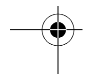
การบำรุงรักษาและการทำความสะอาด

▶ **ก่อนปรับแต่งเครื่อง (ต. ย. เช่น การบำรุงรักษา การเปลี่ยนเครื่องมือ ฯลฯ) รวมทั้งเมื่อเคลื่อนย้ายและเก็บเข้าที่ ให้ตั้งสวิทซ์ปรับทิศทางหมุนไว้ที่ตำแหน่งกลางเสมอ** หากสวิทซ์เปิด-ปิดถูกกดโดยไม่เจตนา อาจทำให้บุคคลบาดเจ็บได้



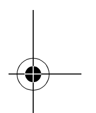



- **เพื่อให้ทำงานได้อย่างถูกต้องและปลอดภัย ต้องรักษาเครื่องและช่องระบายอากาศให้สะอาดอยู่เสมอ**

หากแบตเตอรี่ใช้งานต่อไปอีกไม่ได้ กรุณาติดต่อศูนย์บริการหลังการขายสำหรับเครื่องมือไฟฟ้า บ๊อช ที่ได้รับแต่งตั้ง

เมื่อจำเป็นต้องเปลี่ยนสายไฟฟ้า ให้ส่งเครื่องให้บริษัท บ๊อช หรือศูนย์บริการลูกค้าสำหรับเครื่องมือไฟฟ้า บ๊อช ที่ได้รับมอบหมายทำการเปลี่ยนให้ เพื่อหลีกเลี่ยงอันตรายด้านความปลอดภัย



เครื่องมือไฟฟ้านี้ผ่านกรรมวิธีการผลิตและตรวจสอบอย่างละเอียดถี่ถ้วนมาแล้ว ถึงกระนั้น หากเครื่องเกิดขัดข้อง ต้องส่งเครื่องให้ศูนย์บริการหลังการขายสำหรับเครื่องมือไฟฟ้า บ๊อช ซ่อมแซม

เมื่อต้องการสอบถามและสั่งซื้ออะไหล่ กรุณาแจ้งหมายเลขสินค้าสิบหลักบนแผ่นป้ายรุ่นของเครื่องทุกครั้ง

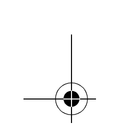
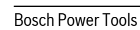
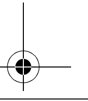
การบริการหลังการขายและการให้คำแนะนำลูกค้า

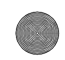
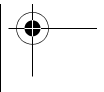
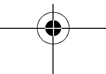
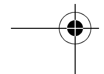
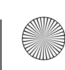
ศูนย์บริการหลังการขายของเรายินดีตอบคำถามของท่านที่เกี่ยวกับการบำรุงรักษาและการซ่อมแซมผลิตภัณฑ์รวมทั้งเรื่องอะไหล่ ภาพขยายและข้อมูลเกี่ยวกับอะไหล่ กรุณาดูใน:

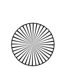
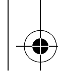
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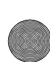
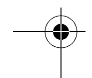
แผนกให้คำปรึกษาลูกค้าของเราพร้อมให้คำแนะนำที่ดีที่สุดแก่ท่านในเรื่องการซื้อผลิตภัณฑ์ การใช้งานและการปรับแต่งผลิตภัณฑ์และอุปกรณ์ประกอบต่างๆ

ในกรณีประกัน ซ่อมแซม หรือซื้อชิ้นส่วนมาเปลี่ยน กรุณาติดต่อผู้ขายที่ได้รับแต่งตั้งเท่านั้น

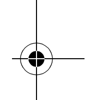
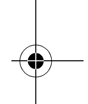
ประเทศไทย

สำนักงาน

บริษัท โรเบิร์ต บ๊อช จำกัด
ชั้น 11 ตึกลิเบอร์ตี้ สแควร์
287 ถนนสีลม
กรุงเทพฯ 10500
โทรศัพท์ +66 (0)2 / 6 31 18 79 – 18 88 (10 หมายเลข)
โทรสาร +66 (0)2 / 2 38 47 83
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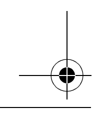
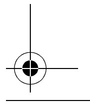
ตู้ไปรษณีย์

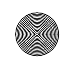
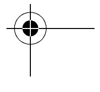
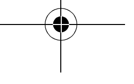
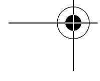
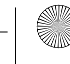
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แผนกเครื่องมือไฟฟ้า
ตู้ ปณ. 20 54

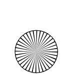
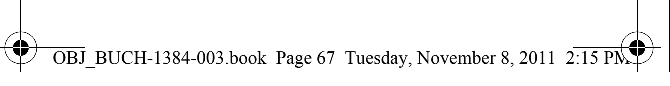


กรุงเทพฯ 10501
ประเทศไทย

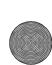
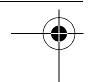
ศูนย์บริการซ่อมและฝึกอบรม

ศูนย์บริการซ่อมและฝึกอบรมบ๊อช
2869 – 2869/1 ซอยบ้านกล้วย
ถนนพระรามที่ 4 (ใกล้ทางรถไฟสายปากน้ำเก่า)
พระโขนง
กรุงเทพฯ 10110
ประเทศไทย
โทรศัพท์ +66 (0)2 / 6 71 78 00 – 4
โทรสาร +66 (0)2 / 2 49 42 96
โทรสาร +66 (0)2 / 2 49 52 99


การขนส่ง

แบตเตอรี่ลิเธียม ไอออน ที่บรรจุอยู่ภายใต้ข้อกำหนดแห่งกฎหมายสินค้าอันตราย ผู้ใช้สามารถขนส่งแบตเตอรี่โดยทางถนนโดยไม่มีข้อบังคับอื่น หากขนส่งโดยบุคคลที่สาม (เช่น : การขนส่งทางอากาศ หรือตัวแทนขนส่งสินค้า) ต้องปฏิบัติตามข้อกำหนดพิเศษเกี่ยวกับการบรรจุภัณฑ์และการติดฉลาก ในการจัดเตรียมสิ่งของที่จะจัดส่ง ต้องปรึกษาผู้เชี่ยวชาญสำหรับวัตถุอันตราย

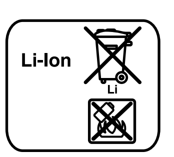
การกำจัดขยะ



เครื่อง แบตเตอรี่ที่นำกลับมาชาร์จใหม่ได้ อุปกรณ์ประกอบ และหีบห่อ ต้องนำไปแยกประเภทวัสดุ เพื่อนำกลับมาใช้ใหม่โดยไม่ทำลายสภาพแวดล้อม

อย่าทิ้งเครื่องมือไฟฟ้าและแบตเตอรี่/แบตเตอรี่ที่นำกลับมาชาร์จใหม่ได้ลงในขยะบ้าน!

แพ็คแบตเตอรี่/แบตเตอรี่:

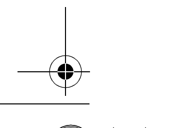
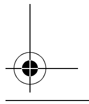
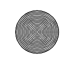
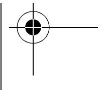
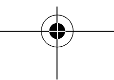
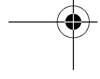
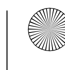


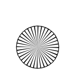
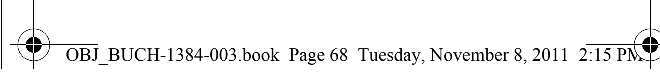
Li-ion:
กรุณาปฏิบัติตามคำสั่งในบท "การขนส่ง" หน้า 67

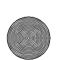
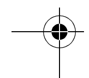
- **อนุญาตให้ถอดแบตเตอรี่ที่ใส่รวมอยู่ในเครื่อง** (integrated batteries) **ออกเพื่อนำไปกำจัดเท่านั้น** การเปิดปลอกครอบเครื่องสามารถสร้างความเสียหายหรือทำลายเครื่องมือไฟฟ้า

เมื่อต้องการถอดแบตเตอรี่ออกจากเครื่อง ให้กดสวิทช์เปิด-ปิด 7 จนแบตเตอรี่ได้คายประจุออกไปทั้งหมด ขันสกรูในครอบเครื่องและเอาเปลือกครอบออก ปลดการเชื่อมต่อในจุดต่างๆ บนแบตเตอรี่ และถอดแบตเตอรี่ออก

ขอสงวนสิทธิ์ในการเปลี่ยนแปลงโดยไม่ต้องแจ้งล่วงหน้า

Bahasa Indonesia

Petunjuk-Petunjuk untuk Keselamatan Kerja

Petunjuk-Petunjuk Umum untuk Perkakas Listrik

⚠ PERHATIKANLAH **Bacalah semua petunjuk-petunjuk untuk keselamatan kerja dan petunjuk-petunjuk untuk penggunaan.** Kesalahan dalam menjalankan petunjuk-petunjuk untuk keselamatan kerja dan petunjuk-petunjuk untuk penggunaan dapat mengakibatkan kontak listrik, kebakaran dan/atau luka-luka yang berat.

Simpanlah semua petunjuk-petunjuk untuk keselamatan kerja dan petunjuk-petunjuk lainnya untuk penggunaan di masa depan.

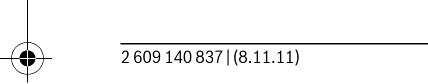
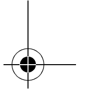
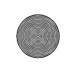
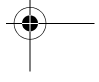
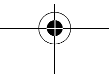
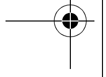
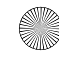
Kata „perkakas listrik“ yang disebutkan di dalam petunjuk-petunjuk untuk keselamatan kerja adalah sebutan untuk perkakas listrik pakai listrik jaringan (dengan kabel) dan untuk perkakas listrik tenaga baterai (tanpa kabel listrik).

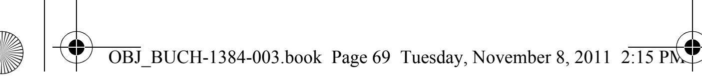
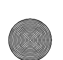
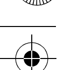
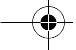
Keselamatan kerja di tempat kerja

- **Jagalah supaya tempat kerja selalu bersih dan terang.** Tempat kerja yang tidak rapi atau tidak terang dapat mengakibatkan terjadinya kecelakaan.
- **Janganlah menggunakan perkakas listrik di tempat di mana dapat terjadi ledakan, di mana ada cairan, gas atau debu yang mudah terbakar.** Perkakas listrik dapat memancarkan bunga api yang lalu mengakibatkan debu atau uap terbakar.
- **Selama menggunakan perkakas listrik, jauhkan anak-anak dan orang-orang lain dari tempat kerja.** Jika konsentrasi terganggu, bisa jadi Anda tidak bisa mengendalikan perkakas listrik tersebut.

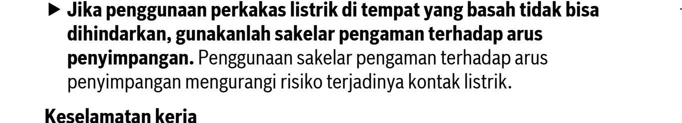
Keamanan listrik

- **Steker dari perkakas listrik harus cocok pada stopkontak. Janganlah sekali-kali merubah steker. Janganlah menggunakan steker perantara bersama dengan perkakas listrik yang mempunyai hubungan arde.** Steker yang tidak dirubah dan stopkontak yang cocok mengurangi bahaya terjadinya kontak listrik.

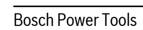
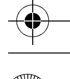
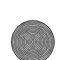
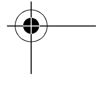
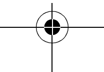
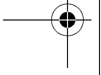
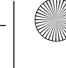
- **Jagalah supaya badan Anda tidak bersentuhan dengan permukaan yang mempunyai hubungan arde, misalnya pipa-pipa, radiator pemanas ruangan, kompor listrik dan lemari es.** Ada risiko besar terjadi kontak listrik, jika badan Anda mempunyai hubungan arde.
- **Jagalah supaya perkakas listrik tidak kena hujan atau menjadi basah.** Air yang masuk ke dalam perkakas listrik menambah risiko terjadinya kontak listrik.
- **Janganlah menyalah gunakan kabel listrik untuk mengangkat dan menggantungkan perkakas listrik atau untuk menarik steker dari stopkontak. Jagalah supaya kabel listrik tidak kena panas, minyak, pinggiran yang tajam atau bagian-bagian perkakas yang bergerak.** Kabel listrik yang rusak atau tersangkut menambah risiko terjadinya kontak listrik.
- **Jika Anda menggunakan perkakas listrik di luar gedung, gunakanlah hanya kabel sambungan yang juga cocok untuk pemakaian di luar gedung.** Penggunaan kabel sambungan yang cocok untuk pemakaian di luar gedung mengurangi risiko terjadinya kontak listrik.

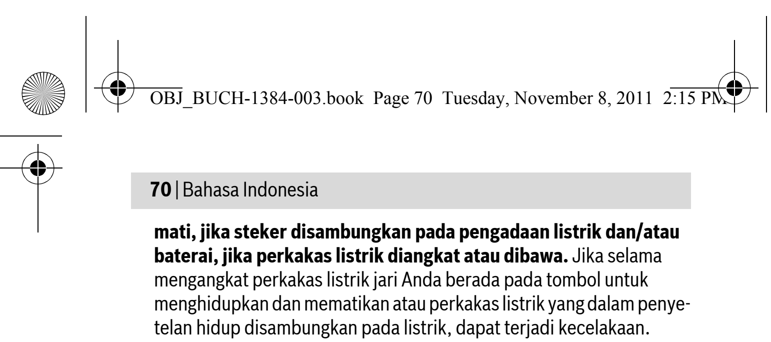


- **Jika penggunaan perkakas listrik di tempat yang basah tidak bisa dihindarkan, gunakanlah sakelar pengaman terhadap arus penyimpangan.** Penggunaan sakelar pengaman terhadap arus penyimpangan mengurangi risiko terjadinya kontak listrik.

Keselamatan kerja

- **Berhati-hatilah selalu, perhatikanlah apa yang Anda kerjakan dan bekerjalah dengan seksama jika menggunakan perkakas listrik. Janganlah menggunakan perkakas listrik, jika Anda capai atau berada di bawah pengaruh narkoba, minuman keras atau obat.** Jika Anda sekejap mata saja tidak berhati-hati sewaktu menggunakan perkakas listrik, dapat terjadi luka-luka berat.
- **Pakailah pakaian dan sarana pelindung dan pakailah selalu kaca mata pelindung.** Dengan memakai pakaian dan sarana pelindung, misalnya kedok anti debu (masker), sepatu tertutup yang tidak licin, helm pelindung atau pemalut telinga sesuai dengan pekerjaan yang dilakukan dengan perkakas listrik, bahaya terjadinya luka-luka dapat dikurangi.
- **Jagalah supaya perkakas listrik tidak dihidupkan secara tidak disengaja. Perhatikan bahwa perkakas listrik dalam penyetelan**

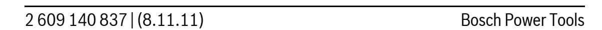
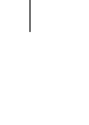
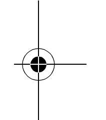
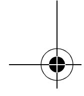
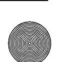
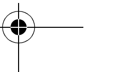


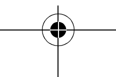
mati, jika steker disambungkan pada pengadaan listrik dan/atau baterai, jika perkakas listrik diangkat atau dibawa. Jika selama mengangkat perkakas listrik jari Anda berada pada tombol untuk menghidupkan dan mematikan atau perkakas listrik yang dalam penyetelan hidup disambungkan pada listrik, dapat terjadi kecelakaan.

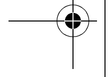
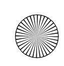
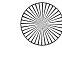
- **Lepaskan semua perkakas-perkakas penyetelan atau kunci-kunci pas sebelum perkakas listrik dihidupkan.** Perkakas atau kunci yang berada di dalam bagian yang berputar dapat mengakibatkan terjadinya luka-luka.
- **Aturkan badan sedemikian sehingga Anda bisa bekerja dengan aman. Berdirilah secara mantap dan jagalah selalu keseimbangan.** Dengan demikian Anda bisa mengendalikan perkakas listrik dengan lebih baik, jika terjadi sesuatu dengan tiba-tiba.
- **Pakailah pakaian yang cocok. Janganlah memakai pakaian yang longgar atau perhiasan. Jagalah supaya rambut, pakaian dan sarung tangan tidak masuk dalam bagian-bagian perkakas yang bergerak.** Pakaian yang longgar, rambut panjang atau perhiasan dapat tersangkut dalam bagian perkakas yang bergerak.
- **Jika ada kemungkinan untuk memasangkan sarana penghisapan dan penampungan debu, perhatikan bahwa sarana-sarana ini telah dipasangkan dan digunakan dengan betul.** Penggunaan sarana penghisapan bisa mengurangi bahaya yang disebabkan debu.

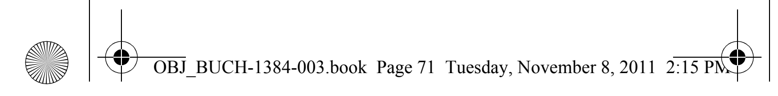
Penggunaan dan penanganan perkakas listrik dengan seksama

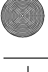
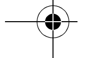
- **Janganlah membebankan perkakas listrik terlalu berat. Gunakan selalu perkakas listrik yang cocok untuk pekerjaan yang dilakukan.** Dengan perkakas listrik yang cocok Anda bekerja lebih baik dan lebih aman dalam batas-batas kemampuan yang ditentukan.
- **Janganlah menggunakan perkakas listrik yang tombolnya rusak.** Perkakas listrik yang tidak bisa dihidupkan atau dimatikan, berbahaya dan harus direparasikan.
- **Tariklah steker dari stopkontak dan/atau keluarkan baterai, sebelum Anda melakukan penyetelan pada perkakas listrik, mengganti alat-alat kerja atau sebelum menyimpan perkakas listrik.** Tindakan keselamatan kerja ini mengurangi bahaya perkakas listrik hidup secara tidak disengaja.
- **Simpanlah perkakas listrik yang tidak digunakan di luar jangkauan anak-anak. Janganlah mengizinkan orang-orang yang tidak**





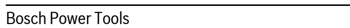
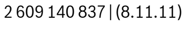
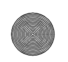
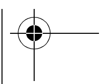
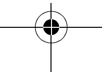
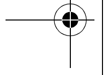
mengenal perkakas listrik ini atau yang belum membaca petunjuk-petunjuk ini, menggunakan perkakas listrik ini. Perkakas listrik bisa menjadi berbahaya, jika digunakan oleh orang-orang yang tidak mengenalnya.

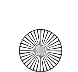
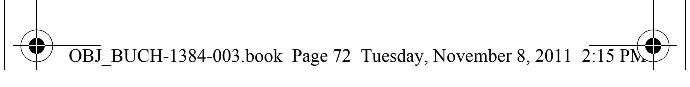
- ▶ **Rawatlah perkakas listrik dengan seksama. Periksalah, apakah bagian-bagian perkakas listrik yang bergerak berfungsi dengan baik dan tidak tersangkut, apakah ada bagian-bagian yang patah atau rusak sedemikian, sehingga dapat mempengaruhi jalannya perkakas listrik. Biarkan bagian-bagian perkakas yang rusak direparasikan, sebelum Anda mulai menggunakan perkakas listrik.** Banyak kecelakaan terjadi karena perkakas listrik tidak dirawat dengan seksama.
- ▶ **Perhatikan supaya alat-alat pemotong selalu tajam dan bersih.** Alat-alat pemotong dengan mata-mata pemotong yang tajam dan dirawat dengan seksama tidak mudah tersangkut dan lebih mudah dikendalikan.
- ▶ **Gunakanlah semua perkakas listrik, aksesori, alat-alat kerja dsb. sesuai dengan petunjuk-petunjuk. Perhatikan syarat-syarat kerja dan macam pekerjaan yang dilakukan.** Penggunaan perkakas listrik untuk macam pekerjaan yang tidak cocok dengan kegunaannya bisa mengakibatkan keadaan yang berbahaya.

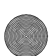
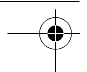



Penanganan dan penggunaan perkakas-perkakas pakai baterai dengan seksama

- ▶ **Isikan baterai hanya dalam alat-alat pencas baterai yang dianjurkan oleh pabrik.** Jika suatu alat pencas baterai yang cocok untuk mengisi satu macam baterai tertentu, digunakan untuk mengisi baterai-baterai lainnya, ada bahaya terjadinya kebakaran.
- ▶ **Gunakanlah hanya baterai-baterai yang cocok dan khusus untuk masing-masing perkakas listrik.** Penggunaan baterai-baterai lain dapat mengakibatkan terjadinya luka-luka dan kebakaran.
- ▶ **Jika baterai tidak digunakan, jauhkan baterai dari klip untuk kertas, uang logam, kunci, paku, sekrup atau benda-benda kecil dari logam lainnya, yang dapat menjembatani kontak-kontak.** Korsleting antara kontak-kontak baterai dapat mengakibatkan kebakaran atau api.
- ▶ **Jika baterai tidak digunakan dengan betul, dapat keluar cairan dari baterai. Jagalah supaya Anda tidak terkena pada cairan ini.**

Jika secara tidak disengaja Anda terkena pada cairan ini, cucikan dengan air. Jika cairan tersebut terkena pada mata, selain tindakan di atas, segara hubungi seorang dokter. Cairan yang keluar dari baterai dapat mengakibatkan gangguan pada kulit atau kebakaran.

Servis

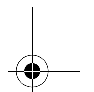
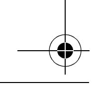
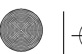
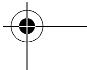
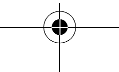
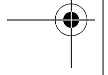
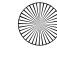
- **Biarkan perkakas listrik Anda direparasikan hanya oleh orang-orang ahli yang berpengalaman dan hanya dengan menggunakan suku cadang yang asli.** Dengan demikian terjamin keselamatan kerja dengan perkakas listrik ini secara berkesinambungan.

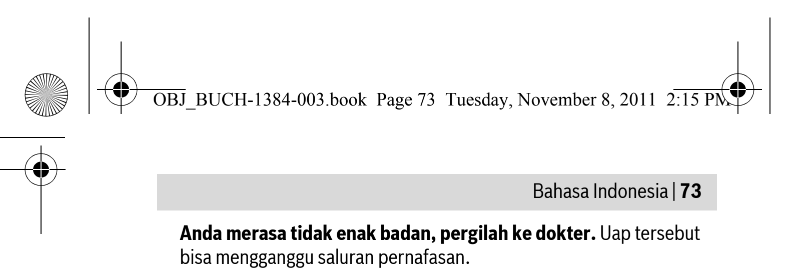
Petunjuk-petunjuk untuk keselamatan kerja untuk obeng elektro

- **Peganglah perkakas listrik hanya pada pegangan yang terisolir, jika Anda melakukan pekerjaan di mana sekrupnya bisa terkena pada saluran listrik yang tidak terlihat.** Sentuhan sekrup pada kabel yang bertegangan dapat mengakibatkan bagian-bagian logam dari perkakas listrik juga bertegangan dan lalu mengakibatkan kontak listrik.
- **Peganglah perkakas listrik secara kencang.** Pada waktu memutar masuk dan memutar ke luar sekrup bisa terjadi momen yang besar untuk waktu yang singkat.
- **Sebelum meletakkan perkakas listrik, tunggulah sampai perkakas berhenti memutar.** Alat kerja bisa tersangkut dan membuat perkakas listrik tidak bisa dikendalikan.
- **Sebelum melakukan semua pekerjaan pada perkakas listrik (misalnya merawat, mengganti alat kerja dsb.) serta selama mentranspor dan menyimpan perkakas listrik, putarkan pengubah arah putaran ke kedudukan tengah.** Jika tombol untuk menghidup-kan dan mematikan mesin digerakkan tanpa sengaja, bisa terjadi luka-luka.


Lindungilah perkakas listrik terhadap suhu yang tinggi, misalnya juga terhadap penyinaran matahari yang berterusan, api, air dan kelembaban. Ada bahaya terjadinya ledakan.

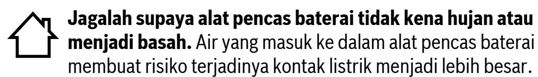
- **Jika baterai rusak dan jika baterai digunakan salah, baterai bisa mengeluarkan uap. Biarkan udara segar mengalir masuk dan jika**



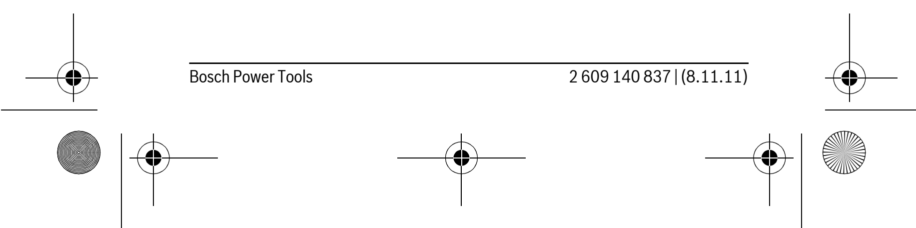
Anda merasa tidak enak badan, pergilah ke dokter. Uap tersebut bisa mengganggu saluran pernafasan.

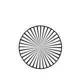
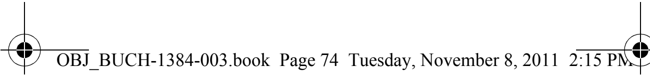
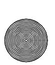
Petunjuk-petunjuk untuk keselamatan kerja untuk alat pencas baterai

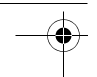


Jagalah supaya alat pencas baterai tidak kena hujan atau menjadi basah. Air yang masuk ke dalam alat pencas baterai membuat risiko terjadinya kontak listrik menjadi lebih besar.

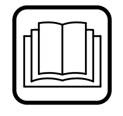
- **Isikan baterai-baterai ion-Li dari Bosch atau baterai-baterai yang terpasangkan dalam produk-produk Bosch selalu dengan tegangan yang tertera di dalam bab Data teknis.** Jika tidak demikian ada bahaya terjadinya kebakaran dan ledakan.
- **Jagalah supaya alat pencas baterai selalu bersih.** Pencemaran bisa mengakibatkan kontak listrik.
- **Sebelum penggunaannya, periksalah selalu alat pencas baterai, kabel dan steker. Jika ada yang rusak, janganlah menggunakan alat pencas baterai. Janganlah membuka sendiri alat pencas baterai dan biarkan kerusakan direparasikan hanya oleh tenaga ahli yang berpengalaman dan dengan menggunakan suku cadang yang asli merek Bosch.** Alat pencas baterai, kabel dan steker yang rusak membuat risiko terjadinya kontak listrik menjadi lebih besar.
- **Selama penggunaannya, janganlah meletakkan alat pencas baterai di alas yang mudah terbakar (misalnya kertas, bahan tekstil dsb.) atau di lingkungan yang mudah terbakar.** Alat pencas baterai menjadi panas selama pengisian yang bisa mengakibatkan terjadinya kebakaran.
- **Awasilah anak-anak.** Dengan demikian terjamin bahwa anak-anak tidak menggunakan alat pencas baterai sebagai mainan.
- **Anak-anak dan orang-orang yang berdasarkan kemampuan fisik, sensoris atau mental atau karena tidak berpengalaman atau karena tidak mengetahui, tidak mampu untuk menggunakan alat pencas baterai dengan aman, hanya diizinkan untuk menggunakan alat pencas baterai jika diawasi atau jika telah diberitahukan tentang cara penggunaannya oleh orang lain yang bertanggung jawab.** Jika tidak, bisa terjadi penggunaan yang salah yang mengakibatkan terjadinya luka-luka.





Penjelasan tentang produk dan daya

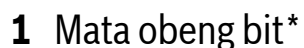
Bacalah semua petunjuk-petunjuk untuk keselamatan kerja dan petunjuk-petunjuk untuk penggunaan. Kesalahan dalam menjalankan petunjuk-petunjuk untuk keselamatan kerja dan petunjuk-petunjuk untuk penggunaan dapat mengakibatkan kontak listrik, kebakaran dan/atau luka-luka yang berat.

Penggunaan perkakas listrik

Perkakas listrik ini cocok untuk memutar masuk dan memutar ke luar sekrup dan baut.

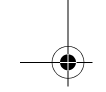
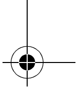
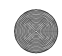
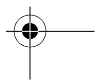
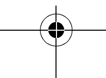
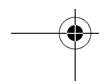
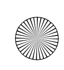
Bagian-bagian pada gambar

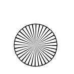
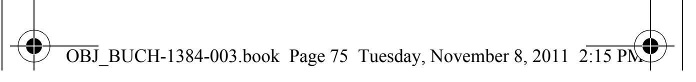
Nomor-nomor dari bagian-bagian perkakas pada gambar sesuai dengan gambar perkakas listrik pada halaman bergambar.

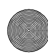
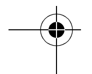


1 Mata obeng bit*
2 Pemegang alat kerja
3 Kap dari karet
4 Petanda arah putaran ke kanan
5 Petanda keberisian baterai
6 Petanda arah putaran ke kiri
7 Tombol untuk menghidupkan dan mematikan
8 Omsakelar arah putaran
9 Lampu „Power Light“
10 Pegangan (genggaman terisolir)
11 Alat pencas baterai
12 Tambahan berbentuk siku*
13 Tambahan untuk penyetelan momen putar*
14 Ring untuk penyetelan pendahuluan momen putar*
15 Tanda untuk penyetelan momen putar*
16 Ring pembuka penguncian*

***Aksesori yang ada pada gambar atau yang dijelaskan, tidak termasuk pasokan standar. Semua aksesori yang ada bisa Anda lihat dalam program aksesori Bosch.**

Data teknis

Obeng elektro pakai aki		IXO Professional
Nomor model		3 601 J60 2..
Tegangan nominal	V=	3,6
Kecepatan putaran tanpa beban	min^{-1}	180
Momen putar maks. penyekrupan ketat/lunak menurut ISO 5393	Nm	4/3
Ø-sekrup maks.	mm	5
Berat sesuai dengan EPTA-Procedure 01/2003	kg	0,3
Baterai		**ion Li**
Kapasitas	Ah	1,3
Banyaknya sel baterai		1
Alat pencas baterai		
Nomor model		2 607 225 093
Lama pengisian	h	5
Klasifikasi keamanan		⧈/II

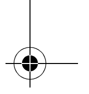
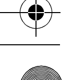
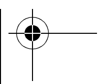
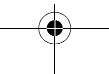
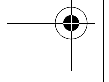
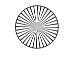
Perhatikanlah nomor model perkakas listrik Anda yang tercantum pada label tipe mesin. Nama dagang dari beberapa perkakas listrik bisa berbeda.

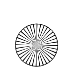
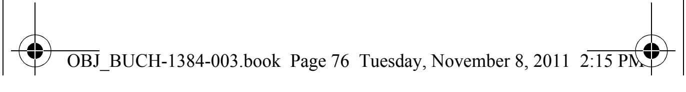
Cara memasang

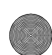
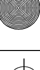
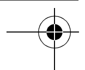
- **Sebelum melakukan semua pekerjaan pada perkakas listrik (misalnya merawat, mengganti alat kerja dsb.) serta selama mentranspor dan menyimpan perkakas listrik, putarkan pengubah arah putaran ke kedudukan tengah.** Jika tombol untuk menghidupkan dan mematikan mesin digerakkan tanpa sengaja, bisa terjadi luka-luka.

Cara mengisi baterai (lihat gambar A)

- **Janganlah menggunakan alat pencas baterai yang lain.** Alat pencas baterai yang dipasok bersama perkakas dicocokkan pada baterai ion Li yang berada di dalam perkakas listrik Anda.
- **Perhatikanlah tegangan jaringan listrik!** Tegangan jaringan listrik harus sesuai dengan tegangan yang tercantum pada label tipe alat pencas baterai.

Petunjuk: Baterai dipasok dalam keadaan diisi sebagian. Untuk menjamin daya penuh dari baterai, sebelum penggunaannya untuk pertama kalinya, isikanlah baterai sampai penuh sama sekali di dalam alat pencas baterai.

Baterai ion-Li bisa diisi sewaktu-waktu, tanpa mengurangi daya tahannya. Baterai tidak menjadi rusak jika pengisiannya dihentikan untuk sementara waktu.

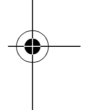
Aki ion Li dilindungi terhadap pengosongan total. Jika aki kosong, perkakas listrik dimatikan secara otomatis: Alat kerja berhenti memutar dan terdengar nada sinyal yang lembut.

⚠ PERHATIKANLAH **Lepaskan tekanan pada tombol untuk menghidupkan dan mematikan mesin, jika perkakas listrik mati secara otomatis.** Jika tombol ditekan terus, baterai bisa menjadi rusak.

Jika petanda keberisian aki **5** pada waktu tombol untuk menghidupkan dan mematikan **7 setengah ditekan, menyala merah**, aki mempunyai kurang dari 30 % dari kapasitasnya dan harus diisikan.



Aki segera mulai diisi jika steker dari alat pencas baterai dimasukkan ke dalam stopkontak dan obeng elektro pakai aki dipasangkan pada alat pencas baterai **11**.



Petanda keberisian aki **5** menunjukkan status pengisian aki. Selama pengisian petanda menyala **hijau**. Jika petanda keberisian aki **5** berhenti menyala, aki terisi penuh.

Selama pengisian, gagang dari perkakas listrik menjadi panas. Ini hal yang lazim.

Jika alat pencas baterai tidak digunakan untuk waktu yang lama, putuskan sambungannya pada jaringan listrik.

Perkakas listrik tidak dapat digunakan selama pencasan; jadi perkakas listrik tidak rusak, jika selama pencasan perkakas listrik tidak berfungsi.

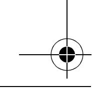
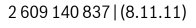
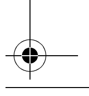
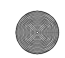
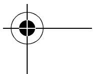
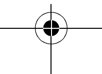
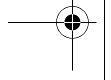
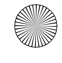
- **Jagalah supaya alat pencas baterai tidak menjadi basah!**

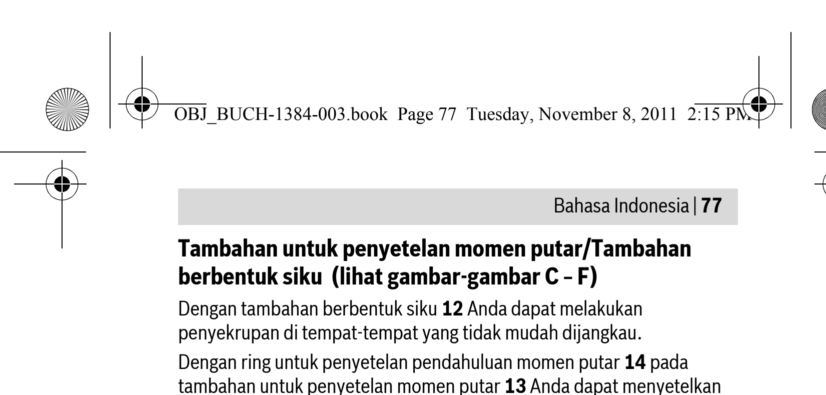
Perhatikanlah petunjuk-petunjuk untuk membuang.

Mengganti alat kerja (lihat gambar B)

- **Janganlah menggunakan mata obeng bit timbal balik yang lebih panjang dari 25 mm.**

Pasangkan mata obeng bit **1** langsung pada pemegang alat kerja **2**.



Tambahan untuk penyetelan momen putar/Tambahan berbentuk siku (lihat gambar-gambar C – F)

Dengan tambahan berbentuk siku **12** Anda dapat melakukan penyekrupan di tempat-tempat yang tidak mudah dijangkau.

Dengan ring untuk penyetelan pendahuluan momen putar **14** pada tambahan untuk penyetelan momen putar **13** Anda dapat menyetelkan momen putar yang dibutuhkan dalam 10 tingkatan sebelum penggunaan perkakas. Jika penyetelan momen putar betul, alat kerja akan berhenti berputar segera setelah permukaan sekrup tanam sama rata dengan permukaan bahan atau momen putar yang disetelkan sebelumnya, tercapai.

Cara memasang (lihat gambar-gambar C – D)

Untuk memasangkan tambahan-tambahan, tarikkan kap dari karet **3** ke depan sampai lepas. Setelah itu tambahan-tambahan dapat dipasangkan. Tambahan-tambahan dapat dipasangkan dengan diputarkan sebanyak 45°.

Melepaskan (lihat gambar-gambar E – F)

Untuk melepaskan tambahan-tambahan, putarkan ring pembuka penguncian **16** dalam arah putaran ❶ dan tarikkan tambahan ke depan sampai lepas. Setelah itu, pasangkan kembali kap dari karet **3**.

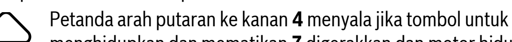
Penggunaan

Cara penggunaan

Menyetel arah putaran

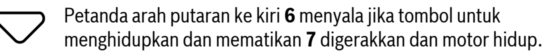
Dengan omsakelar arah putaran **8** Anda bisa merubah arah putaran dari perkakas listrik. Akan tetapi ini tidak mungkin jika tombol untuk menghidupkan dan mematikan mesin **7** sedang ditekan.

Arah putaran ke kanan: untuk memutar masuk sekrup, tekan omsakelar arah putaran **8** ke kiri sampai batas.

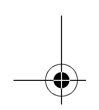


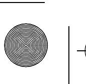
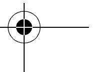
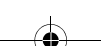
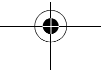
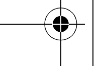
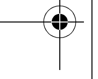
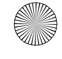
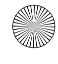
Petanda arah putaran ke kanan **4** menyala jika tombol untuk menghidupkan dan mematikan **7** digerakkan dan motor hidup.

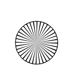
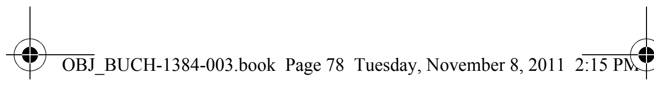
Arah putaran ke kiri: untuk melepaskan atau memutar ke luar sekrup, tekan omsakelar arah putaran **8** ke kanan sampai batas.

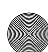
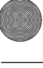
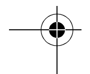


Petanda arah putaran ke kiri **6** menyala jika tombol untuk menghidupkan dan mematikan **7** digerakkan dan motor hidup.



Menghidupkan/mematikan perkakas listrik

Untuk **menghidupkan**, tekan tombol untuk menghidupkan dan mematikan **7** dan tahan tekanan.

Lampu **9** menyala jika tombol untuk menghidupkan dan mematikan **7** ditekan ringan atau ditekan sampai batas dan berguna untuk menerangi bidang kerja yang tidak terang jika ruangan gelap.

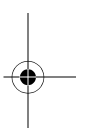
Untuk **mematikan** perkakas listrik, lepaskan tombol untuk menghidupkan dan mematikan **7**.

Penguncian poros otomatis (Auto-Lock)

Jika tombol untuk menghidupkan dan mematikan **7** tidak ditekan, poros mesin terkunci.

Dengan demikian bisa diputarkan masuk sekrup jika aki kosong atau perkakas listrik bisa digunakan sebagai obeng.

▶ **Jika poros mesin terkunci, janganlah menekan tombol untuk menghidupkan dan mematikan 7 lebih lama dari 15 detik. Jika tidak, perkakas listrik bisa menjadi rusak.**

Petunjuk-petunjuk untuk pemakaian

▶ **Pasangkan perkakas listrik pada sekrup hanya jika perkakas listrik dalam keadaan mati.** Alat kerja-alat kerja yang berputar bisa meleset.

Di bagian samping dari alat pencas baterai **11** bisa disimpan hingga 13 mata obeng bit. Kedudukan mata obeng bit bisa dilepaskan.

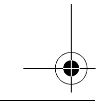
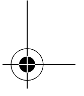
Penempatan alat pencas baterai (lihat gambar G)

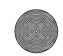
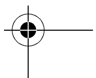
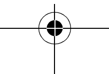
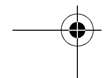
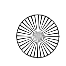
Alat pencas baterai **11** bisa dikencangkan pada dinding. Untuk melakukannya, celah-celah di sebelah samping dijadikan tempat untuk ke 2 sekrup.

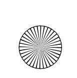
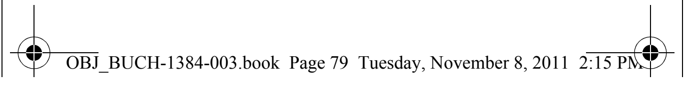
Rawatan dan servis

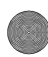
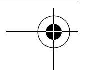
Rawatan dan kebersihan

▶ **Sebelum melakukan semua pekerjaan pada perkakas listrik (misalnya merawat, mengganti alat kerja dsb.) serta selama mentranspor dan menyimpan perkakas listrik, putarkan pengubah**

arah putaran ke kedudukan tengah. Jika tombol untuk menghidupkan dan mematikan mesin digerakkan tanpa sengaja, bisa terjadi luka-luka.

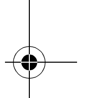
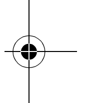
- **Perkakas listrik dan lubang ventilasi harus selalu dibersihkan supaya perkakas bisa digunakan dengan baik dan aman.**

Jika baterai tidak berfungsi lagi, hubungilah satu Service Center untuk perkakas listrik Bosch yang resmi.

Jika kabel listrik harus digantikan, pekerjaan ini harus dilakukan oleh Bosch atau Service Center untuk perkakas listrik Bosch yang resmi, supaya keselamatan kerja selalu terjamin.

Jika pada suatu waktu perkakas listrik ini tidak bisa berjalan meskipun telah diproduksikan dan diperiksa dengan seksama, maka reparasinya harus dilakukan oleh Service Center perkakas listrik Bosch yang resmi.

Jika Anda hendak menanyakan sesuatu atau memesan suku cadang, sebutkan selalu nomor model yang terdiri dari 10 angka dan tercantum pada label tipe pekakas.

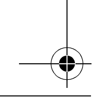
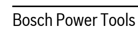
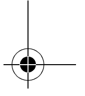




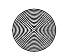
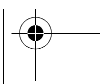
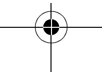
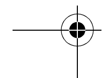
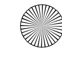
Layanan pasca beli dan konsultasi bagi pelanggan

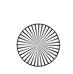
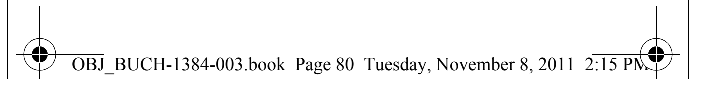
Layanan pasca beli Bosch menjawab semua pertanyaan Anda tentang reparasi dan perawatan serta tentang suku cadang produk ini. Gambar tiga dimensi dan informasi tentang suku cadang bisa Anda lihat di:
www.bosch-pt.com
Tim konsultan Bosch dengan senang hati membantu Anda pada pembelian, penggunaan dan penyetelan produk ini dan aksesorinya.

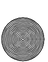
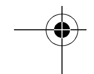
Indonesia

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Tel.: +62 (21) 46 83 25 22
Fax: +62 (21) 46 82 86 45/68 23
E-Mail: sales@multimayaka.co.id
www.bosch-pt.co.id

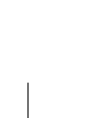



Transpor

Pada baterai-baterai ion-Li yang digunakan diterapkan persyaratan terkait peraturan-peraturan tentang bahan-bahan yang berbahaya. Baterai-baterai dapat diangkut oleh penggunanya di jalanan tanpa harus memenuhi syarat-syarat tertentu.
Pada pengiriman oleh pihak ketiga (misalnya transportasi dengan pesawat udara atau perusahaan ekspedisi) harus ditaati syarat-syarat terkait kemasan dan pemberian tanda. Dalam hal ini, untuk mempersiapkan transportasi harus diminta dukungan seorang ahli bahan-bahan berbahaya.

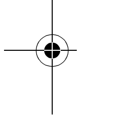
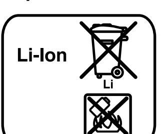
Cara membuang


Semua perkakas listrik, baterai, aksesori dan kemasan sebaiknya didaur ulangkan sesuai dengan upaya untuk melindungi lingkungan hidup.



Janganlah membuang perkakas listrik, aki/baterai ke dalam sampah rumah tangga!

Aki/Baterai:

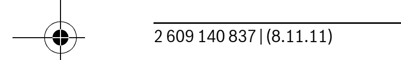



Ion-Li:
Perhatikanlah petunjuk-petunjuk dalam bab „Transpor“, halaman 80.

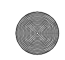
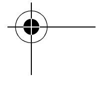
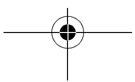
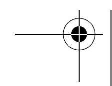
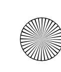
- **Baterai-baterai yang terpadu hanya boleh dikeluarkan jika hendak dibuang.** Jika rumahan dibuka, bisa jadi perkakas listrik menjadi rusak.

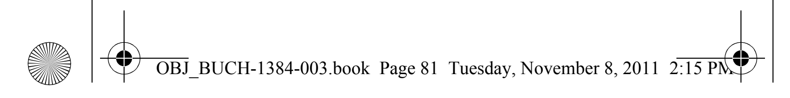
Untuk mengeluarkan aki dari perkakas listrik, gerak-gerakkan tombol untuk menghidupkan dan mematikan **7** sampai aki kosong sama sekali. Putarkan baut-baut pada rumahan mesin sampai ke luar dan lepaskan kulit rumahan. Putuskan sambungan-sambungan pada aki dan keluarkan aki.

Perubahan adalah hak Bosch.










Tiếng Việt

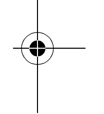
Các Nguyên Tắc An Toàn

Cảnh báo tổng quát cách sử dụng an toàn dụng cụ điện cầm tay

⚠ CẢNH BÁO **Đọc kỹ mọi cảnh báo an toàn và hướng dẫn.** Không tuân thủ mọi cảnh báo và hướng dẫn được liệt kê dưới đây có thể bị điện giựt, gây cháy và/hay bị thương tật nghiêm trọng.

Hãy giữ tất cả tài liệu về cảnh báo và hướng dẫn để tham khảo về sau.

Thuật ngữ “dụng cụ điện cầm tay” trong phần cảnh báo là đề cập đến sự sử dụng dụng cụ điện cầm tay của bạn, loại sử dụng điện nguồn (có dây cắm điện) hay vận hành bằng pin (không dây cắm điện).

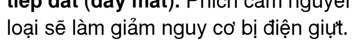


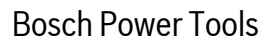
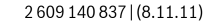
Khu vực làm việc an toàn

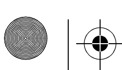
- ▶ **Giữ nơi làm việc sạch và đủ ánh sáng.** Nơi làm việc bừa bộn và tối tăm dễ gây ra tai nạn.
- ▶ **Không vận hành dụng cụ điện cầm tay trong môi trường dễ gây nổ, chẳng hạn như nơi có chất lỏng dễ cháy, khí đốt hay rác.** Dụng cụ điện cầm tay tạo ra các tia lửa nên có thể làm rác bén cháy hay bốc khói.
- ▶ **Không để trẻ em hay người đến xem đứng gần khi vận hành dụng cụ điện cầm tay.** Sự phân tâm có thể gây ra sự mất điều khiển.

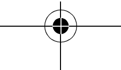
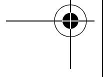
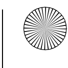
An toàn về điện

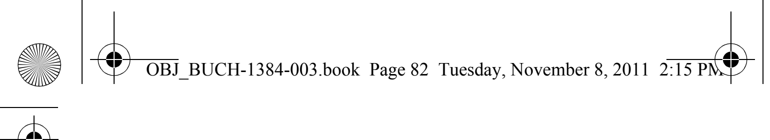
- ▶ **Phích cắm của dụng cụ điện cầm tay phải thích hợp với ổ cắm. Không bao giờ được cải biến lại phích cắm dưới mọi hình thức. Không được sử dụng phích tiếp hợp nối tiếp đất (dây mát).** Phích cắm nguyên bản và ổ cắm đúng loại sẽ làm giảm nguy cơ bị điện giựt.

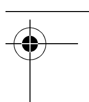




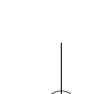
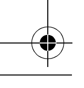
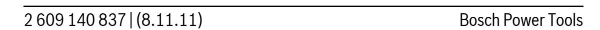


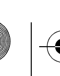
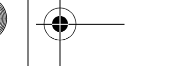


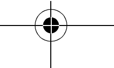
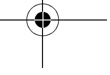
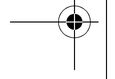
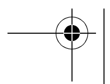
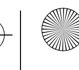
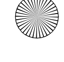

- ▶ **Tránh không để thân thể tiếp xúc với đất hay các vật có bề mặt tiếp đất như đường ống, lò sưởi, hàng rào và tủ lạnh.** Có nhiều nguy cơ bị điện giựt hơn nếu cơ thể bạn bị tiếp hay nối đất.
- ▶ **Không được để dụng cụ điện cầm tay ngoài mưa hay ở tình trạng ẩm ướt.** Nước vào máy sẽ làm tăng nguy cơ bị điện giựt.
- ▶ **Không được lạm dụng dây dẫn điện. Không bao giờ được nắm dây dẫn để xách, kéo hay rút phích cắm dụng cụ điện cầm tay. Không để dây gần nơi có nhiệt độ cao, dầu nhớt, vật nhọn bén hay bộ phận chuyển động.** Làm hỏng hay cuộn rối dây dẫn làm tăng nguy cơ bị điện giựt.
- ▶ **Khi sử dụng dụng cụ điện cầm tay ngoài trời, dùng dây nối thích hợp cho việc sử dụng ngoài trời.** Sử dụng dây nối thích hợp cho việc sử dụng ngoài trời làm giảm nguy cơ bị điện giựt.
- ▶ **Nếu việc sử dụng dụng cụ điện cầm tay ở nơi ẩm ướt là không thể tránh được, dùng thiết bị ngắt mạch tự động (RCD) bảo vệ nguồn.** Sử dụng thiết bị thiết bị ngắt mạch tự động RCD làm giảm nguy cơ bị điện giựt.

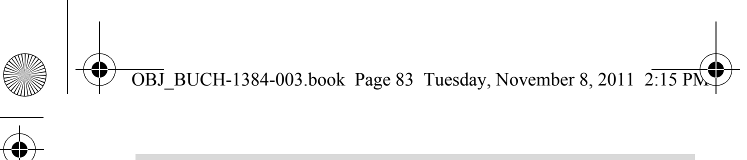
An toàn cá nhân

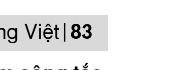
- ▶ **Hãy tỉnh táo, biết rõ mình đang làm gì và hãy sử dụng ý thức khi vận hành dụng cụ điện cầm tay. Không sử dụng dụng cụ điện cầm tay khi đang mệt mỏi hay đang bị tác động do chất gây nghiện, rượu hay dược phẩm gây ra.** Một thoáng mất tập trung khi đang vận hành dụng cụ điện cầm tay có thể gây thương tích nghiêm trọng cho bản thân.
- ▶ **Sử dụng trang bị bảo hộ cá nhân. Luôn luôn đeo kính bảo vệ mắt.** Trang bị bảo hộ như khẩu trang, giày chống trợt, nón bảo hộ, hay dụng cụ bảo vệ tai khi được sử dụng đúng nơi đúng chỗ sẽ làm giảm nguy cơ thương tật cho bản thân.

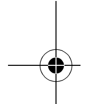
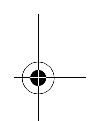





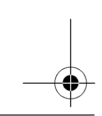
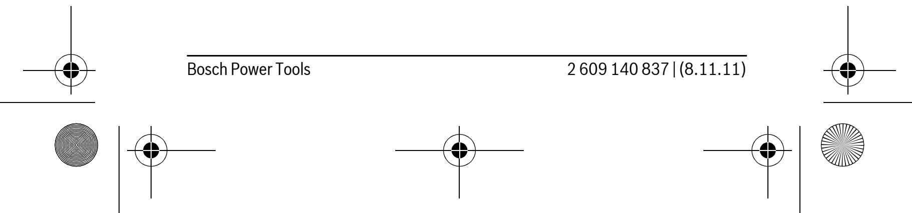
- **Phòng tránh máy khởi động bất ngờ. Bảo đảm công tắc máy ở vị trí tắt trước khi cắm vào nguồn điện và/hay lắp pin vào, khi nhấc máy lên hay khi mang xách máy.** Ngáng ngón tay vào công tắc máy để xách hay kích hoạt dụng cụ điện cầm tay khi công tắc ở vị trí mở dễ dẫn đến tai nạn.
- **Lấy mọi chìa hay khóa điều chỉnh ra trước khi mở điện dụng cụ điện cầm tay.** Khóa hay chìa còn gắn dính vào bộ phận quay của dụng cụ điện cầm tay có thể gây thương tích cho bản thân.
- **Không rướn người. Luôn luôn giữ tư thế đứng thích hợp và thăng bằng.** Điều này tạo cho việc điều khiển dụng cụ điện cầm tay tốt hơn trong mọi tình huống bất ngờ.

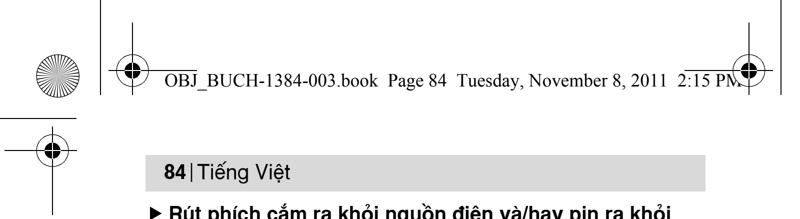



- **Trang phục thích hợp. Không mặc quần áo rộng lùng thùng hay mang trang sức. Giữ tóc, quần áo và găng tay xa khỏi các bộ phận chuyển động.** Quần áo rộng lùng thùng, đồ trang sức hay tóc dài có thể bị cuốn vào các bộ phận chuyển động.
- **Nếu có các thiết bị đi kèm để nối máy hút bụi và các phụ kiện khác, bảo đảm các thiết bị này được nối và sử dụng tốt.** Việc sử dụng các thiết bị gom hút bụi có thể làm giảm các độc hại liên quan đến bụi gây ra.

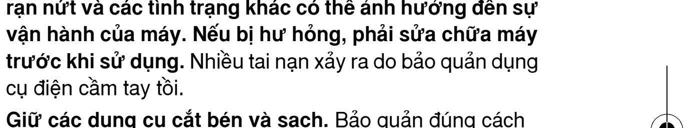
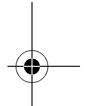
Sử dụng và bảo dưỡng dụng cụ điện cầm tay

- **Không được ép máy. Sử dụng dụng cụ điện cầm tay đúng loại theo đúng ứng dụng của bạn.** Dụng cụ điện cầm tay đúng chức năng sẽ làm việc tốt và an toàn hơn theo đúng tiến độ mà máy được thiết kế.
- **Không sử dụng dụng cụ điện cầm tay nếu như công tắc không tắt và mở được.** Bất kỳ dụng cụ điện cầm tay nào mà không thể điều khiển được bằng công tắc là nguy hiểm và phải được sửa chữa.



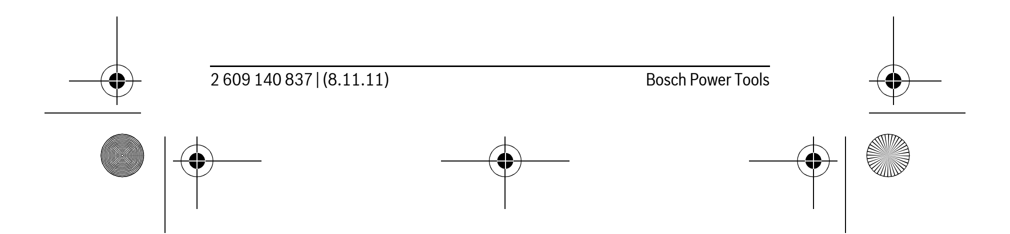
- **Rút phích cắm ra khỏi nguồn điện và/hay pin ra khỏi dụng cụ điện cầm tay trước khi tiến hành bất kỳ điều chỉnh nào, thay phụ kiện, hay cất dụng cụ điện cầm tay.** Các biện pháp ngăn ngừa như vậy làm giảm nguy cơ dụng cụ điện cầm tay khởi động bất ngờ.
- **Cất giữ dụng cụ điện cầm tay không dùng tới nơi trẻ em không lấy được và không cho người chưa từng biết dụng cụ điện cầm tay hay các hướng dẫn này sử dụng dụng cụ điện cầm tay.** Dụng cụ điện cầm tay nguy hiểm khi ở trong tay người chưa được chỉ cách sử dụng.
- **Bảo quản dụng cụ điện cầm tay. Kiểm tra xem các bộ phận chuyển động có bị sai lệch hay kẹt, các bộ phận bị rạn nứt và các tình trạng khác có thể ảnh hưởng đến sự vận hành của máy. Nếu bị hư hỏng, phải sửa chữa máy trước khi sử dụng.** Nhiều tai nạn xảy ra do bảo quản dụng cụ điện cầm tay tồi.

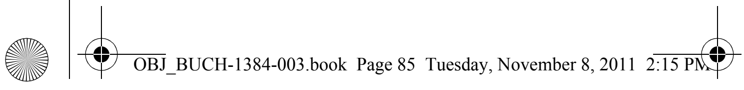



- **Giữ các dụng cụ cắt bén và sạch.** Bảo quản đúng cách các dụng cụ cắt có cạnh cắt bén làm giảm khả năng bị kẹt và dễ điều khiển hơn.
- **Sử dụng dụng cụ điện cầm tay, phụ kiện, đầu cài v. v., đúng theo các chỉ dẫn này, hãy lưu ý đến điều kiện làm việc và công việc phải thực hiện.** Sử sự dụng dụng cụ điện cầm tay khác với mục đích thiết kế có thể tạo nên tình huống nguy hiểm.

Sử dụng và bảo quản dụng cụ dùng pin

- **Chỉ được sạc pin lại với bộ nạp điện do nhà sản suất chỉ định.** Bộ nạp điện thích hợp cho một loại pin có thể gây nguy cơ cháy khi sử dụng cho một loại pin khác.
- **Chỉ sử dụng dụng cụ điện cầm tay với loại pin được thiết kế đặt biệt dành riêng cho máy.** Sử dụng bất cứ loại pin khác có thể dẫn đến thương tật hay cháy.







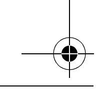
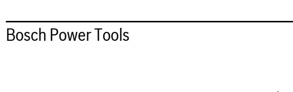
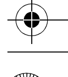
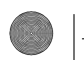
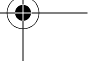
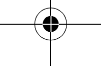
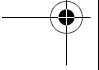
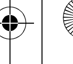

- ▶ **Khi không sử dụng pin, để cách xa các vật bằng kim loại như kẹp giấy, tiền xu, chìa khoá, đinh, ốc vít hay các đồ vật kim loại nhỏ khác, thứ có thể tạo sự nối tiếp từ một đầu cực với một đầu cực khác.** Sự chập mạch của các đầu cực với nhau có thể gây bỏng hay cháy.
- ▶ **Bảo quản ở tình trạng tồi, dung dịch từ pin có thể tứa ra; tránh tiếp xúc. Nếu vô tình chạm phải, hãy xối nước để rửa. Nếu dung dịch vào mắt, cần thêm sự hổ trợ của y tế.** Dung dịch tiết ra từ pin có thể gây ngứa hay bỏng.

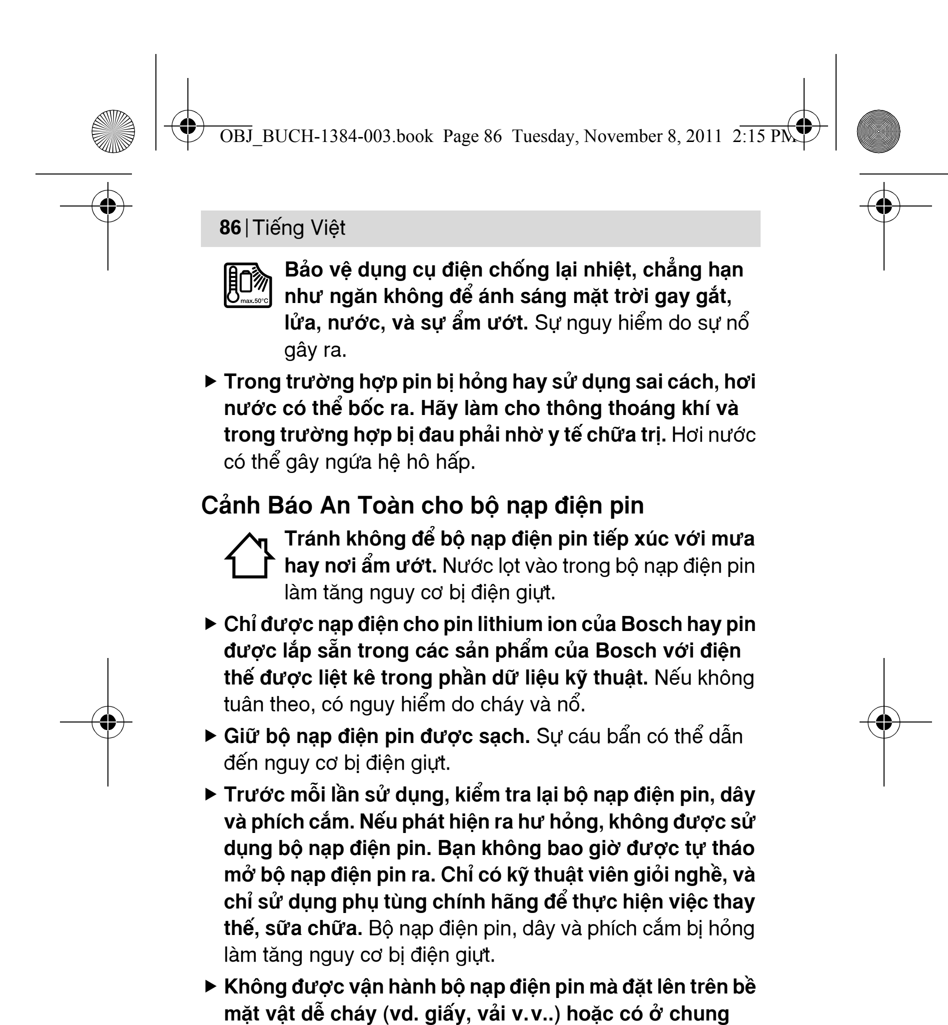
Bảo dưỡng

- ▶ **Đưa dụng cụ điện cầm tay của bạn đến thợ chuyên môn để bảo dưỡng, chỉ sử dụng phụ tùng đúng chủng loại để thay.** Điều này sẽ đảm bảo sự an toàn của máy được giữ nguyên.

Cảnh Báo An Toàn cho Máy Bắt Vít

- ▶ **Nắm giữ dụng cụ điện nơi phần nắm cách điện khi thực hiện việc gia công nơi chi tiết lắp bắt có thể chạm vào dây điện không nhìn thấy được hay chính dây của máy.** Chi tiết lắp bắt chạm dây “có điện” có thể làm cho các bộ phận kim loại không được bao bọc của dụng cụ điện “có điện” và có khả năng gây cho người sử dụng máy bị điện giựt.
- ▶ **Giữ máy bằng cách nắm thật chặt.** Lực vặn ngược mạnh có thể xảy ra chớp nhoáng trong lúc bắt vít vào hay vặn ra.
- ▶ **Luôn luôn đợi cho máy hoàn toàn ngừng hẳn trước khi đặt xuống.** Dụng cụ lắp vào máy có thể bị kẹp chặt dẫn đến việc dụng cụ điện cầm tay bị mất điều khiển.
- ▶ **Trước khi làm bất cứ công việc gì với máy (vd. bảo dưỡng, thay dụng cụ v. v..) cũng như trong quá trình vận chuyển và cất giữ, chỉnh đặt gạc chọn chiều quay về vị trí chính giữa.** Sự vô ý kích hoạt công tắc Tắt/Mở có thể dẫn đến thương tích.



Bảo vệ dụng cụ điện chống lại nhiệt, chẳng hạn như ngăn không để ánh sáng mặt trời gay gắt, lửa, nước, và sự ẩm ướt. Sự nguy hiểm do sự nổ gây ra.

- **Trong trường hợp pin bị hỏng hay sử dụng sai cách, hơi nước có thể bốc ra. Hãy làm cho thông thoáng khí và trong trường hợp bị đau phải nhờ y tế chữa trị.** Hơi nước có thể gây ngứa hệ hô hấp.

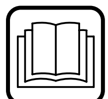
Cảnh Báo An Toàn cho bộ nạp điện pin

Tránh không để bộ nạp điện pin tiếp xúc với mưa hay nơi ẩm ướt. Nước lọt vào trong bộ nạp điện pin làm tăng nguy cơ bị điện giựt.

- **Chỉ được nạp điện cho pin lithium ion của Bosch hay pin được lắp sẵn trong các sản phẩm của Bosch với điện thế được liệt kê trong phần dữ liệu kỹ thuật.** Nếu không tuân theo, có nguy hiểm do cháy và nổ.
- **Giữ bộ nạp điện pin được sạch.** Sự cáu bẩn có thể dẫn đến nguy cơ bị điện giựt.
- **Trước mỗi lần sử dụng, kiểm tra lại bộ nạp điện pin, dây và phích cắm. Nếu phát hiện ra hư hỏng, không được sử dụng bộ nạp điện pin. Bạn không bao giờ được tự tháo mở bộ nạp điện pin ra. Chỉ có kỹ thuật viên giỏi nghề, và chỉ sử dụng phụ tùng chính hãng để thực hiện việc thay thế, sữa chữa.** Bộ nạp điện pin, dây và phích cắm bị hỏng làm tăng nguy cơ bị điện giựt.
- **Không được vận hành bộ nạp điện pin mà đặt lên trên bề mặt vật dễ cháy (vd. giấy, vải v.v..) hoặc có ở chung quanh.** Sự nóng lên của bộ nạp điện pin trong quá trình nạp điện có thể gây ra nguy cơ cháy.
- **Trông chừng trẻ con.** Điều này sẽ bảo đảm trẻ con không chơi nghịch với bộ nạp điện.
- **Trẻ con hay những người do thể trạng, giác quan hay trí tuệ có sự hạn chế hoặc do thiếu kinh nghiệm hay hiểu**

biết nên không có khả năng để vận hành bộ nạp điện một cách an toàn, có thể họ chỉ được sử dụng bộ nạp điện này dưới sự giám sát hay sau khi được người chịu trách nhiệm hướng dẫn. Nếu làm khác đi, có sự nguy hiểm do lỗi sử dụng và thương tích.

Mô Tả Sản Phẩm và Đặc Tính Kỹ Thuật

Đọc kỹ mọi cảnh báo an toàn và mọi hướng dẫn. Không tuân thủ mọi cảnh báo và hướng dẫn được liệt kê dưới đây có thể bị điện giựt, gây cháy và/hay bị thương tật nghiêm trọng.

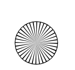
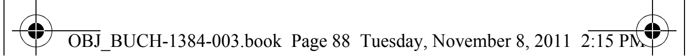
Dành sử dụng cho

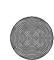
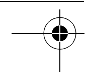
Máy được thiết kế để tháo hoặc bắt vít.

Biểu trưng của sản phẩm

Sự đánh số các biểu trưng của sản phẩm là để tham khảo hình minh họa của máy trên trang hình ảnh.

1 Đầu vít*
2 Phần lắp dụng cụ
3 Chụp cao su
4 Đèn báo hiệu quay chiều phải
5 Đèn báo sự kiểm soát dòng điện nạp
6 Đèn báo hiệu quay chiều trái
7 Công tắc Tắt/Mở
8 Gạc vặn chuyển đổi chiều quay
9 “Đèn Chiếu Sáng”
10 Tay nắm (bề mặt nắm cách điện)
11 Bộ nạp điện pin
12 Đầu truyền lực góc*

13 Bộ lắp lực vặn (momen quay)*

14 Vòng chỉnh trước lực vặn*

15 Dấu chỉ lực vặn chỉnh đặt*

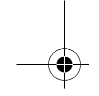
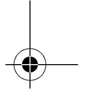
16 Vòng nhả khớp*

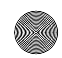
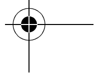
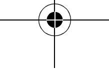
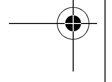
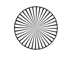
***Phụ tùng được trình bày hay mô tả không phải là một phần của tiêu chuẩn hàng hóa được giao kèm theo sản phẩm. Bạn có thể tham khảo tổng thể các loại phụ tùng, phụ kiện trong chương trình phụ tùng của chúng tôi.**

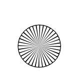
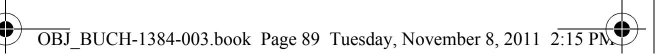
Thông số kỹ thuật

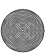
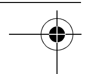
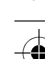
Máy Vặn Vít Pin		**IXO Professional**
Mã số máy		3 601 J60 2..
Điện thế danh định	V=	3,6
Tốc độ không tải	v/p	180
Lực vặn tối đa ứng dụng cho việc bắt vặn vít vào vật liệu cứng/mềm theo ISO 5393	Nm	4/3
Đường kính vít tối đa	mm	5
Trọng lượng theo Qui trình EPTA-Procedure 01/2003 (chuẩn EPTA 01/2003)	kg	0,3
Pin hợp khối		**Li-Ion**
Điện dung	Ah	1,3
Số lượng pin		1
Bộ Nạp Điện Pin		
Mã số máy		2 607 225 093
Thời gian nạp điện	h	5
Cấp độ bảo vệ		□/II

Xin vui lòng xem kỹ mã số máy trên nhãn máy của bạn. Tên thương mãi của từng máy có thể khác nhau.

Sự lắp vào

▶ **Trước khi làm bất cứ công việc gì với máy (vd. bảo dưỡng, thay dụng cụ v. v..) cũng như trong quá trình vận chuyển và cất giữ, chỉnh đặt gạc chọn chiều quay về vị trí chính giữa.** Sự vô ý kích hoạt công tắc Tắt/Mở có thể dẫn đến thương tích.

Nạp điện pin (xem hình A)

▶ **Không được sử dụng các bộ nạp điện pin loại khác.** Bộ nạp điện pin giao kèm máy được thiết kế cho pin Lithium-Ion lắp trong máy của bạn.

▶ **Hãy lưu ý điện thế nguồn!** Điện thế của nguồn điện cung cấp phải phù hợp với các số liệu được ghi trên nhãn mác của bộ nạp điện pin.

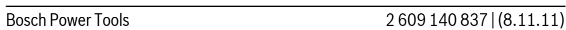
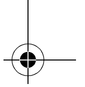
Ghi Chú: Pin giao kèm máy chỉ được nạp điện một phần. Để đảm bảo pin có đầy đủ điện dung, nạp điện hoàn toàn cho pin bằng bộ nạp điện pin trước khi bạn sử dụng dụng cụ điện cho lần đầu tiên.

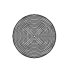
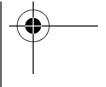
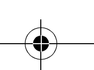
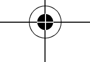
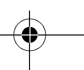
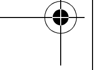
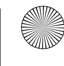
Pin Lithium ion có thể nạp điện bất cứ lúc nào mà vẫn không làm giảm tuổi thọ của pin. Sự làm gián đoạn qui trình nạp điện không làm cho pin bị hư hỏng.

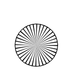
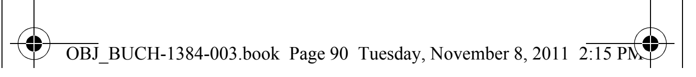
Pin Lithium-Ion được bảo vệ chống lại sự phóng điện quá sâu. Khi pin phóng điện, máy tự động tắt nhờ vào mạch bảo vệ: Dụng cụ chà ráp ngừng chuyển động hoàn toàn và ta có thể nghe tiếng gió rít nhẹ phát ra.

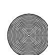
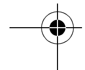
⚠ Lưu ý **Không được tiếp tục nhấn vào công tắc Tắt/Mở sau khi máy đã tự động tắt.** Có thể làm cho pin hỏng.

Khi đèn báo sự kiểm soát dòng điện nạp pin **5** sáng lên **màu đỏ** trong khi công tắc Tắt/Mở **7** được **bóp vào nửa chừng**, nếu vậy thì điện dung pin chỉ còn ít hơn 30% và cần phải nạp điện lại.

Qui trình nạp được tiến hành ngay sau khi phích nối điện nguồn của bộ nạp điện pin được cắm vào ổ điện và sau đó máy vặn vít pin được lắp vào trên bộ nạp điện pin **11**.

Đèn báo sự kiểm soát dòng điện nạp **5** báo hiệu tiến trình nạp điện. Đèn báo sáng lên **màu xanh lá** trong suốt quá trình nạp điện. Khi đèn báo sự kiểm soát dòng điện nạp pin **5** không còn cháy sáng, pin đã nạp đầy điện.

Trong suốt quá trình nạp điện, tay nắm của máy nóng lên. Điều này là bình thường.

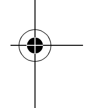
Rút phích cắm của bộ nạp điện pin ra khỏi nguồn điện khi không dùng đến trong một thời gian dài.

Không thể sử dụng dụng cụ điện được trong khi nạp điện; máy không bị hư hỏng khi không hoạt động trong thời gian nạp điện.



- ▶ **Bảo vệ bộ nạp điện pin không bị ẩm ướt!**

Tuân thủ các chú thích dành cho việc thải bỏ.



Thay Dụng Cụ (xem hình B)

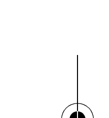
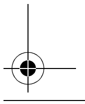
- ▶ **Không được sử dụng tua-vít hai đầu có lưỡi dài hơn 25 mm.**

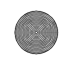
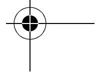
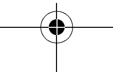
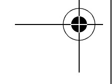
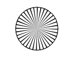
Tra vít đầu gài **1** trực tiếp vào trong phần lắp dụng cụ **2**.

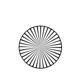
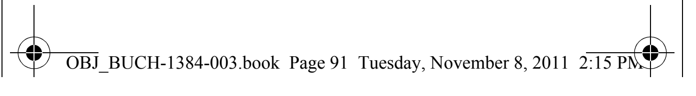
Bộ lắp lực vặn/Đầu Truyền Lực Góc (xem hình C – F)

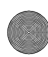
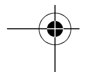
Đầu truyền lực góc **12** cho khả năng bắt vít ở vị thế khó tiếp cận.

Bằng vòng chỉnh đặt trước lực vặn **14** nằm trên bộ lắp lực vặn **13**, lực vặn theo yêu cầu có thể chỉnh đặt trước trong 10 nấc. Với sự chỉnh đặt đúng, dụng cụ đầu gài ngừng ngay khi vít được bắt vào bằng sát mặt vật liệu, hay khi đã đạt đến lực vặn chỉnh đặt.

Sự lắp vào (xem hình C – D)

Để lắp ráp phần phụ tùng gá lắp, kéo chụp cao su **3** ra phía trước. Sau đó, có thể lắp phụ tùng gá lắp vào. Phụ tùng gá lắp có thể lắp vào ở góc khuỷu khoảng 45°.

Tháo ra (xem hình E – F)

Để tháo phần phụ tùng gá lắp, xoay vòng nhả khớp **16** theo chiều quay ❶ và kéo phụ tùng gá lắp ra phía trước. Sau cùng, lắp chụp cao su **3** vào lại.

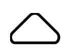
Vận Hành

Bắt Đầu Vận Hành

Đảo Chiều Quay

Gạc chuyển đổi chiều quay **8** được sử dụng để đảo lại chiều quay của máy. Tuy nhiên, việc này không thể thực hiện được cùng lúc với công tắc Tắt/Mở **7** đang hoạt động.

Chiều quay phải: Để bắt vít vào, đẩy gạc chọn chiều quay **8** hết về bên trái.



Đèn báo hiệu quay chiều phải **4** sáng lên khi công tắc Tắt/Mở **7** được khởi hoạt và động cơ bắt đầu hoạt động.



Chiều Quay Trái: Để nới lỏng hay tháo vít, đẩy gạc chỉ chiều quay **8** hết về phải.



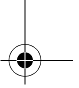
Đèn báo hiệu quay chiều trái **6** sáng lên khi công tắc Tắt/Mở **7** được khởi hoạt và động cơ bắt đầu hoạt động.

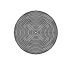
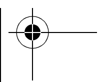
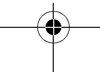
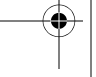
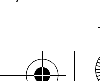
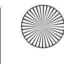
Bật Mở và Tắt

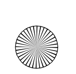
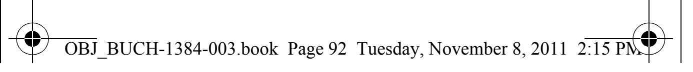
Để khởi **động máy**, nhấn công tắc Tắt/Mở **7** và nhấn giữ xuống.

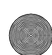
Ánh sáng **9** sáng lên khi công tắt Tắt/Mở **7** được bóp nhẹ hay bóp hết vào cho phép rọi sáng được phạm vi gia công khi tình trạng ánh sáng không được tốt.

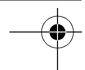
Đề tắt máy, **nhả** công tắc Tắt/Mở **7** ra.





Khóa tự động toàn bộ trục (Khóa tự động)

Trục máy khoan được khóa lại khi công tắc Tắt/Mở **7** không bị bóp vào.

Do vậy nên vẫn có thể bắt vít vào, ngay cả khi điện pin đã cạn và cho phép máy được sử dụng như là một tua-vít.

- **Khi trục máy khoan được khóa lại, không được bóp công tắc Tắt/Mở 7 lâu hơn 15 giây. Nếu không thì có thể gây hư hỏng cho dụng cụ điện.**

Hướng Dẫn Sử Dụng

- **Chỉ được đặt dụng cụ điện cầm tay vào vít khi đã tắt máy.** Dụng cụ đang quay có thể bị tuột ra.



Có thể chứa được 13 vít đầu gài bên trong cạnh hông của bộ nạp điện pin **11**. Phần cố định dùng để lắp ráp vít đầu gài có thể tháo ra được.



Gắn Bộ Nạp Điện Pin lên Tường (xem hình G)

Bộ nạp điện pin **11** có thể gắn lên tường. Để thực hiện, máng bộ nạp điện qua khe trống ở bên hông lên trên hai vít.

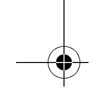
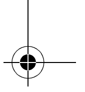
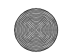
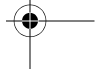
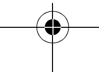
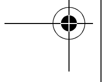
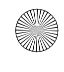
Bảo Dưỡng và Bảo Quản

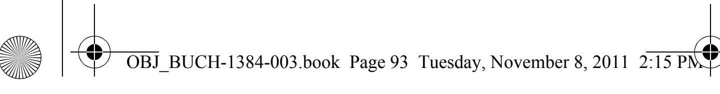
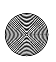
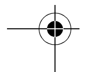
Bảo Dưỡng Và Làm Sạch

- **Trước khi làm bất cứ công việc gì với máy (vd. bảo dưỡng, thay dụng cụ v. v..) cũng như trong quá trình vận chuyển và cất giữ, chỉnh đặt gạc chọn chiều quay về vị trí chính giữa.** Sự vô ý kích hoạt công tắc Tắt/Mở có thể dẫn đến thương tích.
- **Để được an toàn và máy hoạt động đúng chức năng, luôn luôn giữ máy và các khe thông gió được sạch.**

Khi pin không còn hoạt động được nữa, xin liên hệ một đại lý phục vụ hàng sau khi bán dụng cụ điện cầm tay do Bosch ủy nhiệm để được hướng dẫn.



Nếu như cần phải thay dây dẫn điện thì công việc này phải do hãng Bosch, hay một đại lý được Bosch ủy nhiệm thực hiện để tránh gặp sự nguy hiểm do mất an toàn.

Nếu giả như máy bị trục trặc dù đã được theo dõi cẩn thận trong quá trình sản xuất và đã qua chạy kiểm tra, sự sửa chữa phải do trung tâm bảo hành-bảo trì dụng cụ điện cầm tay Bosch thực hiện.

Trong mọi thư từ giao dịch và đơn đặt hàng phụ tùng, xin vui lòng luôn viết đủ 10 con số đã được ghi trên nhãn máy.

Dịch vụ hỗ trợ khách hàng và bảo hành-bảo trì

Bộ phận phục vụ hàng sau khi bán của chúng tôi trả lời các câu hỏi liên quan đến việc bảo dưỡng và sửa chữa các sản phẩm cũng như phụ tùng thay thế của bạn. Sơ đồ mô tả và thông tin về phụ tùng thay thế cũng có thể tra cứu theo dưới đây:

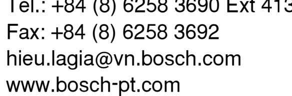


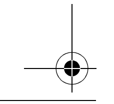
www.bosch-pt.com

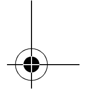
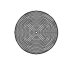
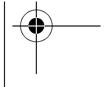
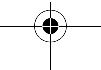
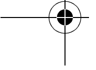
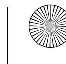
Các nhân viên tư vấn khách hàng của chúng tôi trả lời các câu hỏi của bạn liên quan đến việc mua sản phẩm nào là tốt nhất, cách ứng dụng và điều chỉnh sản phẩm và các phụ kiện.

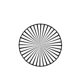
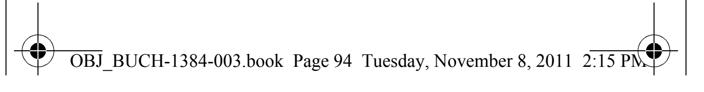
Việt Nam

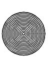
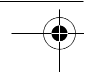
Công ty Trách Nhiệm Hữu Hạn Robert Bosch Việt Nam, PT/SVN
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473 Điện Biên Phủ
Phường 25, Quận Bình Thạnh
Thành Phố Hồ Chí Minh
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Vận Chuyển

Pin có chứa lithium-ion là đối tượng phải tuân theo các qui định của Pháp Luật về Hàng Hóa Nguy Hiểm. Người sử dụng có thể vận chuyển pin bằng đường bộ mà không cần có thêm yêu cầu nào khác.
Khi được vận chuyển thông qua bên thứ ba (vd. vận chuyển bằng đường hàng không hay đại lý giao nhận), phải tuân theo các yêu cầu đặc biệt về đóng gói và dán nhãn. Để chuẩn bị cho món hàng sẽ được gửi đi, cần tham khảo ý kiến của chuyên gia về vật liệu nguy hiểm.

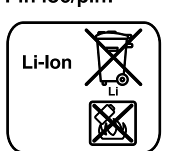
Thải bỏ



Máy, pin nạp điện lại được, phụ kiện và bao bì phải được phân loại để tái chế theo hướng thân thiện với môi trường.

Không được vứt bỏ dụng cụ điện, pin/pin nạp điện lại được vào chung với rác sinh hoạt!

Pin lốc/pin:



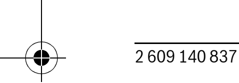
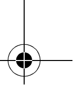
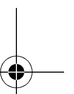


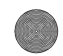
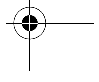
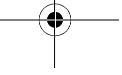
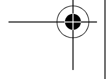
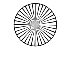
Li-ion:
Xin vui lòng tuân thủ theo thông tin dưới đây “Vận Chuyển”, trang 94.

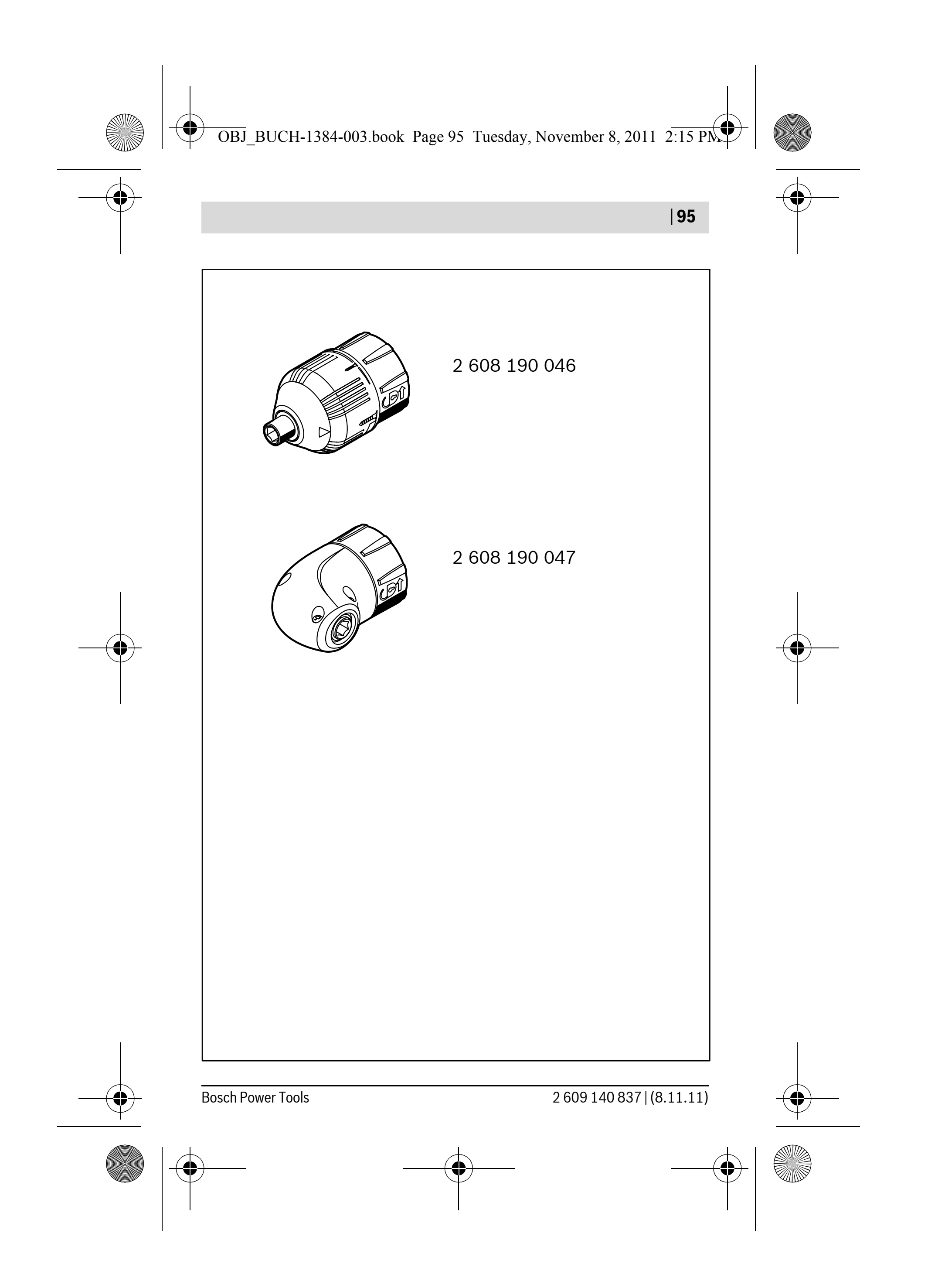
- **Pin tích hợp chỉ có thể được tháo ra để thải bỏ.** Sự mở lớp vỏ ngoài có thể làm hư hại hay hủy hoại dụng cụ điện.

Khi tháo pin ra khỏi máy, kích hoạt công tắc Tắt/Mở liên tục **7** cho đến khi pin đã hoàn toàn phóng hết điện. Tháo vít nằm trong vỏ bọc và lấy khoang lắp pin ra. Tháo các phần đấu nối với pin và lấy pin ra.

Được quyền thay đổi nội dung mà không phải thông báo trước.


2 608 190 046
2 608 190 047